Facultad de Ciencias Jurídicas

Escuela de Estudios Internacionales

Degree work prior to obtaining Bachelor's degree in International Studies,

with bilingual mention in foreign trade

Evolution and analysis of the competitiveness of Ecuadorian exports in non-oil products of the banana sector in the period 2007-2019

Author:

Guadalupe Elizabeth Collaguazo Tacuri

Director:

Ing. Juan Carlos Pauta Ortiz

Cuenca-Ecuador

2022

INDEX

FIGURE INDEX

CHART INDEX

ACKNOWLEDGEMENTS

I thank God for allowing me to have such an extraordinary experience at my university; thanks also to my university for introducing me to incredible people and turning me into a professional.

I especially thank my tutors for their help, patience. They were all part of this professional training process.

I thank my parents for being the main motivation in my life, for their support from start to finish, and for the love, trust, values, and principles they have instilled in me.

DEDICATION

I dedicate this work especially to my parents, Abraham Collaguazo and Martina Tacuri, who have always supported me in building my professional life. I owe many of my achievements to you, primarily this one. It is really satisfying to be able to dedicate something to them that has been achieved with much effort.

To my brothers, Miguel Eduardo, Wilson, Paúl and Freddy because they are the main reason, I am proud; thank you for always being concerned about my well-being.

To my friends, Camila, María Teresa, Paula, Miriam, Andrés, Diego, Ismael, Jonnathan, Daniel, Sebastián, Andrea, Tatiana and Vannesa for being with me every moment and making my days more beautiful.

And without leaving aside my family for giving me their support at all times - thank you very much to my grandparents and cousins for being part of my life.

ABSTRACT

The objective of this work is to identify and estimate the variables that explain the competitiveness of the Ecuadorian banana sector, in order to have a more quantitative financial approach to analyze the development of the Ecuadorian economy. According to the research, different qualitative variables were analyzed, such as economic indicators, for example: GDP, GDP per capita, inflation and trade balance, as well as quantitative variables such as: infrastructure, labor market, cooperation and relationship with employees, business sophistication, innovation, and quality of research institutions. Those that are directly related to the banana sector were obtained from different databases such as the World Bank, the Central Bank of Ecuador and Trade Map. Indeed, different analyses have been carried out using the R tool, where different results could be obtained. The Ecuadorian banana is marketed worldwide thanks to the quality and flavor of the banana, unlike its competitor countries. For example, Costa Rica is becoming one of its main rivals because in recent years, the government has focused on the growth of the banana sector. However, Ecuador has not been left behind since it has several competitive advantages, among them: its location, which has allowed it to become the first banana exporting country in the world.

INTRODUCTION

Within the economy, the level of competitiveness of a country is important because it helps develop a better understanding of the fundamental elements for growth and development within a country.

Therefore, this paper aims to analyze the competitiveness of the banana sector within the period 2007-2019, so it has been considered important to study different quantitative and qualitative variables obtained from the World Bank and Trade Map, in order to determine which are those that help develop a unique competitive advantage within the sector from other competing countries, as well as help to understand why other economies are more successful.

That is why it is pertinent to analyze one of the most productive sectors in Ecuador, the banana sector, one of the most important for the growth of the Ecuadorian economy. Within the analyzed period it was possible to determine that its main competitive advantage over its six competing countries is the climate factor, because it is essential for the growth of quality bananas; therefore, Ecuador has become the main exporter of bananas in the world.

CHAPTER I

1. Ecuadorian banana exports and their competitiveness

1.1. Historical background

To begin with, one of the objectives of a government is to achieve economic and social development. To this end, many countries focus on drawing up national development plans to generate sources of employment, improve citizens' quality of life, avoid inflationary pressures and keep debt manageable (OEA, 1974). Currently, Ecuador's main sources of income are tax collections, oil extraction and exports, which are considered a boost for the growth of the Ecuadorian economy because they generate foreign currency income, making a great contribution to the trade balance (Cedeño Jara, 2018).

For decades, Ecuador's economy has been based mainly on oil production, especially in the 1970s, when oil predominated due to the fact that it had growth in export volume. Oil exports helped revitalize the Ecuadorian economy, but it was not until Ecuador experienced the fall in oil prices strongly affected the economy and the quality of life of Ecuadorians (Acosta, 2006). However, after several years there has been a notable growth in exports of agricultural products such as cocoa, bananas, shrimp and flowers, which have been regaining importance. Grouped together as non-oil exports, they have been evolving in such a way that they have become the main source of income for the Ecuadorian economy (Suconota & Arèvalo, 2017).

Banana activity in the 1970s has had, and still has, weight on the country's economic development, since it has a large share of GDP and generates foreign exchange. On the other hand, within the social aspect it is a generator of employment, especially in the coastal region.

The banana sector is the main hub for economic activity in Ecuador. Its history dates back to the beginning of banana cultivation in the provinces of Manabí, Los Ríos, Guayas, El Oro and Esmeraldas. In particular, since 1925, banana production began in the province of El Oro, commercialized in the markets of Peru and Chile. So, in the early years, Ecuador faced several setbacks, such as a lack of communication routes and an absence of highways. For this reason, the little that was harvested was transported in mules to the railway stations and by river to the shipping ports (Exbanlight, 2019). However, over the years, the Ecuadorian banana had its growth in the international sector. In 1959, Ecuador exceeded 1 million exportable metric tons for the first time in its history and was in 27th place, while in 1951, Ecuador became the first banana exporting country in the world (Mendoza, 2016).

Currently, Ecuador produces several banana varieties, such as the Orito banana, which predominates in the provinces of Cotopaxi and El Oro. The other type of banana is the rose banana, which predominates in the provinces of Los Ríos and Santo Domingo. Finally, the main variety of banana that Ecuador produces and exports is the Cavendish type. This variety has predominated since it replaced “Gros Michel” (Commerce, 2019a). Although it was the star banana of Ecuador, its qualities such as its creaminess and ease of production, produced a great turn in the Ecuadorian economy. However, banana plantations have to face several pests that sometimes end up with hectares damaged not only economically but also socially. In this case, several places were affected by the Black Sigatoka plague, which caused many people to migrate to other areas in order to

improve their quality of life. After the plantations were devastated by pests, the Cavendish type planting was considered as an alternative because it was immune to the fungus, although it was of lower quality and had other characteristics. However, in the long term, this type of banana began to be successful not only nationally but also internationally.

Figure 1: Cavendish type banana

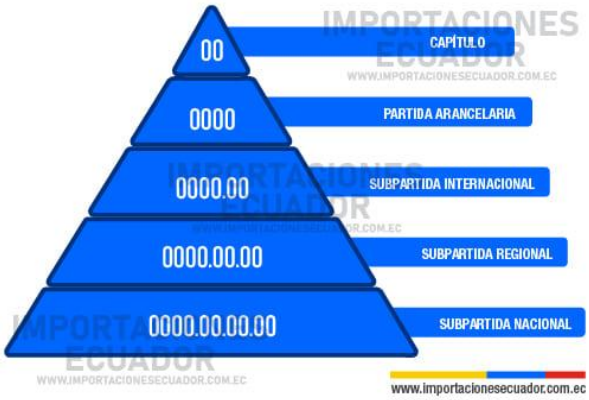
Source: Alibaba

1.1.1. Harmonized System of designation and codification of Ecuadorian merchandise

It is a system used by more than 200 countries as the basis for their customs, tariffs, and the compilation of international trade statistics. This system has great advantages, such as facilitating tax collection and fiscal control, improving understanding by the importer and exporter of which merchandise is being treated, and facilitating negotiation between governments for international agreements, among others.

Regarding the structure of the harmonized system: it has 5,000 groups of basic products, each one identified by a 6-digit group that is supported by rules to achieve a uniform classification (Importaciones Ecuador, 2021).

Figure 2: Structure of the Harmonized System



Source: Importaciones Ecuador

In this research project, we will work with the tariff item code, a universally used 4-digit code that designates one or more goods. In this case, it is focused on heading 0803 “banana or plantain”, which includes all Musa-type edible products, and subheading 08039011 “Cavendish banana”, the type of banana most exported by Ecuador.

1.1.1. Banana characteristics

The origin of the banana was in South Asia. The species of banana that we know arrived in the Canary Islands in the fifteenth century, and from there it was brought to America in 1516. Europeans appreciate bananas, especially as a dessert. On the other hand, according to the Association (BANELINO, 2021), bananas are an essential food that is part of the daily diet of more than 400 million people. As far as history, the name Cavendish comes from William George Spencer Cavendish, who was the sixth Duke of Devonshire. In addition, the banana plants received a botanical name as "Musa Cavendishii" by the Duke (Cruz, 2007).

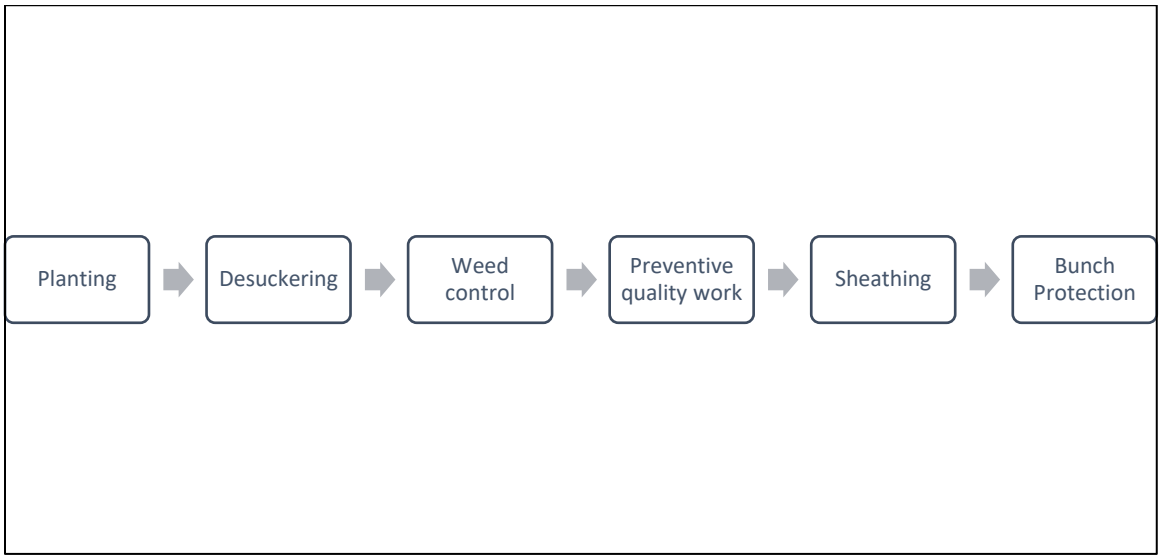
- Cavendish bananas are eaten raw, or can be prepared in the oven, in fruit salads or as compotes.
- According to the FAO (2016), the Cavendish banana does not have seeds, synonymous with sterility. That is why it requires a different production treatment.

- They are rich in potassium and an excellent source of carbohydrates. The quality of the final product depends on some factors, such as the environment, which may not be very controllable, and others related to the control of the product.
- In this context, to be able to export a quality product is based mainly on the ripening time, since the banana shows changes in respiration, color, and texture, aroma, and above all the flavor.
- The necessary temperature for banana growth is between 21° and 30°C, with an average of 27°C. If temperatures are higher or lower, they cause deterioration and slow development, causing irreversible damage to the fruit.
- Banana reproduction is carried out by asexual means only, through vegetative material to the seed of the mother plant with large and vigorous clusters.

The most important part is the sowing; after having made the hole, the seed is placed 2-3 cm deep, so that it is easier to receive the sun's rays. It is also advisable to leave the soil caked, to avoid rotting of the material. The most used planting method is square planting, where the planting distance is 4 meters between plants and 4 meters between rows, obtaining a density of 625 plants per hectare (El Productor, 2018). Currently, Cavendish banana exports represent 94% of the total share, while other types of bananas such as orito bananas and rose bananas represent the remaining 2% of the sector's exports.

1.1.1.1. Production

Figure 3: Banana agronomic processes



Source: Loinesa

Regarding the production of bananas, it is a process that demands advanced technology in order to guide the banana from the selection and treatment in order to obtain a completely clean and healthy fruit.

1.1.1.2. Ripening

There are two methods of maturation: physiological and organoleptic.

- Physiological: This ripening method it refers to the stage of banana development in which maximum growth and ripening have occurred.
- Organoleptic: This method refers to when the fruit reaches its maximum point of flavor and aroma suitable for consumption.
- Senescence: It refers to the aging of the banana.

On the other hand, according to the Ministry of Foreign Trade of Ecuador (2017), an ISO standard was implemented that establishes a ripening process that includes:

a) After the arrival of the product, a quality and condition control is carried out.

b) The banana bag is cut to facilitate gas exchange and allow ethylene and oxygen to reach the fruit.

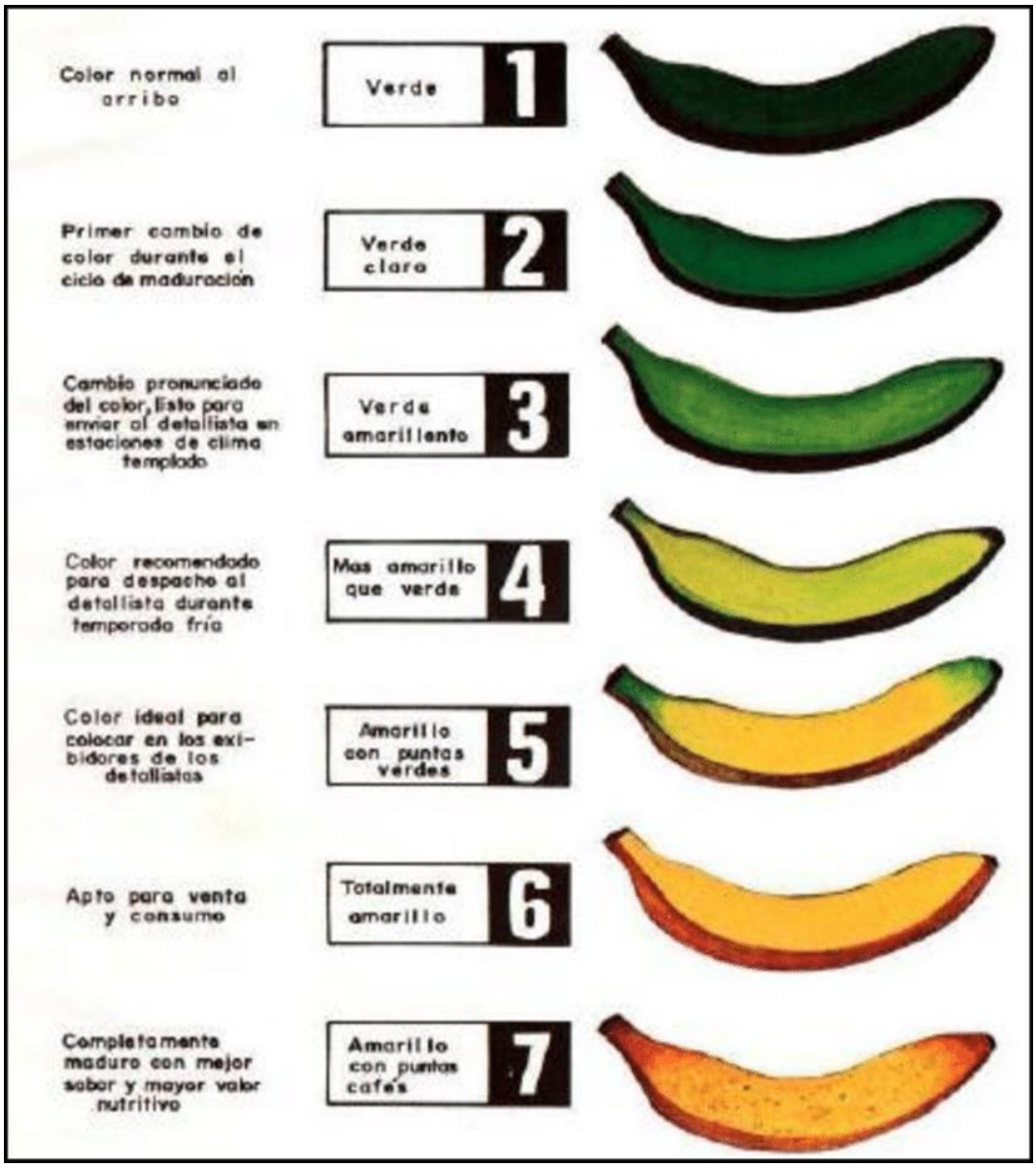
c) The banana is placed in the ripening room, and its temperature is leveled between 15° and 17°.

d) Ethylene is added for 24 hours, which facilitates the ripening process

e) After 24 hours, the chamber is opened. The ripening process begins at that moment. The rate of maturation depends on the temperature of the pulp.

f) The banana leaves the chamber with a color between 4 or 5 maximum; generally after 5-7 days it is delivered to the final consumer. (Ministry of Foreign Trade of Ecuador, 2017)

Figure 4: Von Loesecke scale to measure ripening in banana fruits



Source: Christopher Ramírez

1.1.1.3. International Trade

International trade is one of the factors that supports the growth of national economies. Its birth arises from the inability to produce everything an economy needs to develop, so that economies must open to other markets to obtain different products and services. The exchanges that take place between different countries have been increasing due to facilities such as trade

liberalization and the elimination of tariff and non-tariff barriers (Delgado & Escorihuela, 2020). The growth of the Ecuadorian economy has been closely linked to its exports since the cocoa boom, then the shrimp boom, and finally the banana boom. Ecuador is a country that has based its economy primarily on agricultural products. That is, international trade brings benefits in the sense that it can import different machinery in order to continue innovating its production and, above all, increase the volume of non-oil exports (Sanchez, Zambrano & Bocca, 2010).

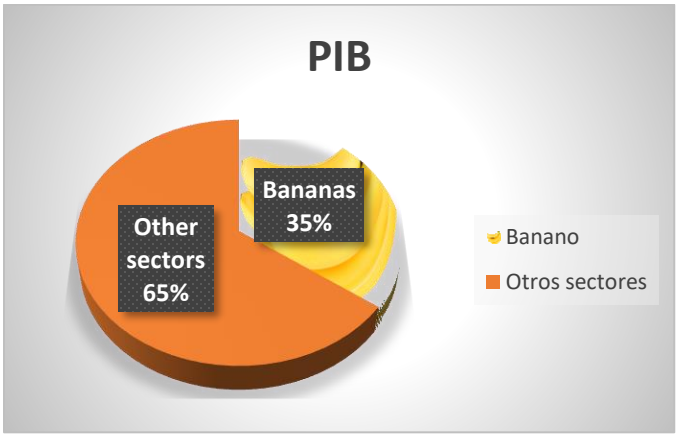
So, in order to gain knowledge about the development of the economy, analysis of some characteristics must be taken into account:

1.1.1.4. GDP

According to the Central Bank of Ecuador, the gross domestic product (GDP) is the value of end-use goods and services generated by economic agents during a period. GDP growth is essential within an economy, since it can reflect an increase in economic activity within a country. In this way, if the GDP grows, it means that levels of unemployment tend to decrease and that per capita income tends to increase.

In this sense, exports are one of the factors that drive production and guarantee the sustainability of economic growth. Currently, within Ecuador's economy, products have diversified into oil and non-oil, traditional and non-traditional exports. On the other hand, it is important to recognize that exports have represented positive income for the progress of the trade balance, in particular, exports of non-oil products such as cocoa, shrimp, bananas, and flowers, which have grown in recent years (Cedeño Jara, 2018). As for banana production, it is an important generator of jobs and foreign exchange. In addition, it is the second largest source of income for the state. Banana exports make up 2% of the general GDP and 35% of agricultural GDP (Ministry of Foreign Trade of Ecuador, 2017).

Figure 5: Influence of the banana sector on GDP



Self-illustrated

1.1.1.5. Trade agreements

Within the economy of each country, there are several factors that help strengthen the growth of international trade. In this context, trade agreements have not only commercial benefits but also economic ones. They make it possible to reduce or in some cases eliminate tariff and non-tariff barriers to trade, improve the competitiveness of companies, facilitate foreign investment, and improve competitiveness with other countries with different conditions. In addition, they help countries become more integrated into the world economy. However, there are sectors where not all products can benefit from the signing of a free trade agreement. In some cases, there are products that are sensitive in a negotiation process that must be protected with different mechanisms.

Focusing on the banana sector in Ecuador, there are several agreements that have benefited the Ecuadorian banana - in particular, the trade agreement between Ecuador and the European Union, in which the Ecuadorian banana has been recognized worldwide for its excellent flavor and quality, which makes it more competitive with the rest of the countries, easily becoming a

threatening figure for the producers and exporters in the same sector (Andrade Rodríguez & Meza Lino, 2017).

On the other hand, Ecuador maintains other commercial agreements in force, such as:

- Agreement with Chile
- Cartagena Agreement (1969)
- Ecuador-Cuba Trade Agreement (2000)
- Ecuador-Nicaragua Trade Agreement (2017)
- Ecuador-El Salvador Trade Agreement (2017)
- AAEI-EFTA (2018)
- Agreement with the United Kingdom (2019)

In this way, trade agreements act as international instruments that provide Ecuador with better economic development, and also improve the relationship with Ecuador's trading partners, in order to boost foreign trade, and above all strengthen national industry towards international markets (Central Bank of Ecuador, 2019).

1.1.1.6. Balance of trade

Balance of trade is defined as an accounting process in which commercial operations, services and capital movements of a country abroad are recorded (Economipedia, 2020). In 2007, non-oil exports showed a positive performance, registering a growth of 7.5% due to large export volumes. Banana or plantain exports contributed 54.6% of the total income from traditional exports. In 2008, non-oil exports reached an FOB of 6,816.96 million dollars, a 13.75% increase in value. The banana sector represented 24.04% of exports. In 2009, total exports reached 10,957.93 million dollars. However, this represented a deficit, or a drop of

33.85%; the main reason for this deficit was due to the drop in the value of oil exports. On the other hand, non-oil exports grew 8.82%, and the banana sector had a 29.7% share.

In 2010, the non-oil trade balance increased its trade deficit to 55.09% compared to the previous year; with respect to non-oil exports, totaling an FOB value of 6,345.63 million, a higher level of 12.81%. The main product that stood out in its production was bananas with 26.9%.

In 2011, the non-oil trade balance shows an increase in the trade deficit of 13.95%; this was due to the growth of non-oil imports. Non-oil exports totaled an FOB value of 7,726. 59 million, a higher 19.67% level. These products represented large volumes as in the unit price. As in previous years, the banana sector had a 29.45% share. In 2012, the non-oil trade balance showed an increase of 6.5% in its trade deficit. Non-oil exports totaled an FOB value of 8,211,2 million, an increase of 6.6%; they had a global drop in volume and a growth in their unit price. Banana and plantain had a 21.2% share in exports. In 2013, the accumulated deficit in the trade balance increased by 6.7%. Non-oil exports totaled $8,869,100 million dollars. The product with the highest participation is bananas with 22%. In 2014, the non-oil trade balance decreased its trade deficit to 22.6%. Regarding non-oil exports, it represented an FOB value of 10,317,9 00 million, an amount that was 17.4% higher than the previous year. The product with the highest participation was bananas and plantains with 20.9%.

In 2015, the trade balance decreased its deficit by 29.1%. Non-oil exports represented a value of 9,717, 400 million, a decrease of 5.8%. The participation of bananas within traditional exports was 24.2%. In 2016, the trade balance deficit decreased to 72.7%. Non-oil exports represented a value of 9,371,100 million, an amount 3.6% lower than the previous year. Within non-oil exports, the participation of bananas and plantains was 24.3%. In 2017, the trade balance increased its deficit by 128.2%. Non-oil exports had an FOB value of 10,126,500 million, an amount higher by 8.1%, representing an increase in export volume. Banana had the largest share with 25.2%. In 2018, the trade balance increased its deficit by 50.3%. Non-oil

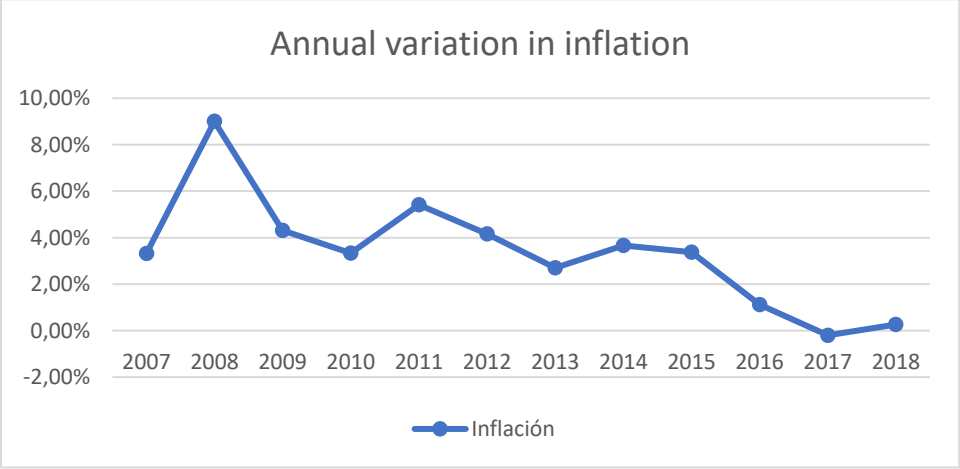
exports represented an FOB value of 10,638,100 million, an increase of 5.1%, and traditional non-oil exports had a value of 6,259,300 million, a value higher by 6.1%. As for the percentage of traditional exports, it was 58.8%. Finally, the participation of bananas was 24.7% in non-oil exports (Central Bank of Ecuador).

However, despite the fact that non-oil exports have grown in recent years, the trade balance in the 2007-2018 period presented a trade deficit; that is, imports were more relevant in these years.

1.1.1.7. Inflation

Inflation is defined as the general increase in the prices of goods and services in an economy over a period of time (Economipedia, 2020). It is a term of great relevance because all countries at some point must inflate prices by only two or three percent. If at some point there were no inflation, prices would fall, and that is what is most feared, since deflation can slow down consumption and the country's economy.

Figure 6: Annual variation in the price of bananas in the period 2007-2018



Self-illustrated

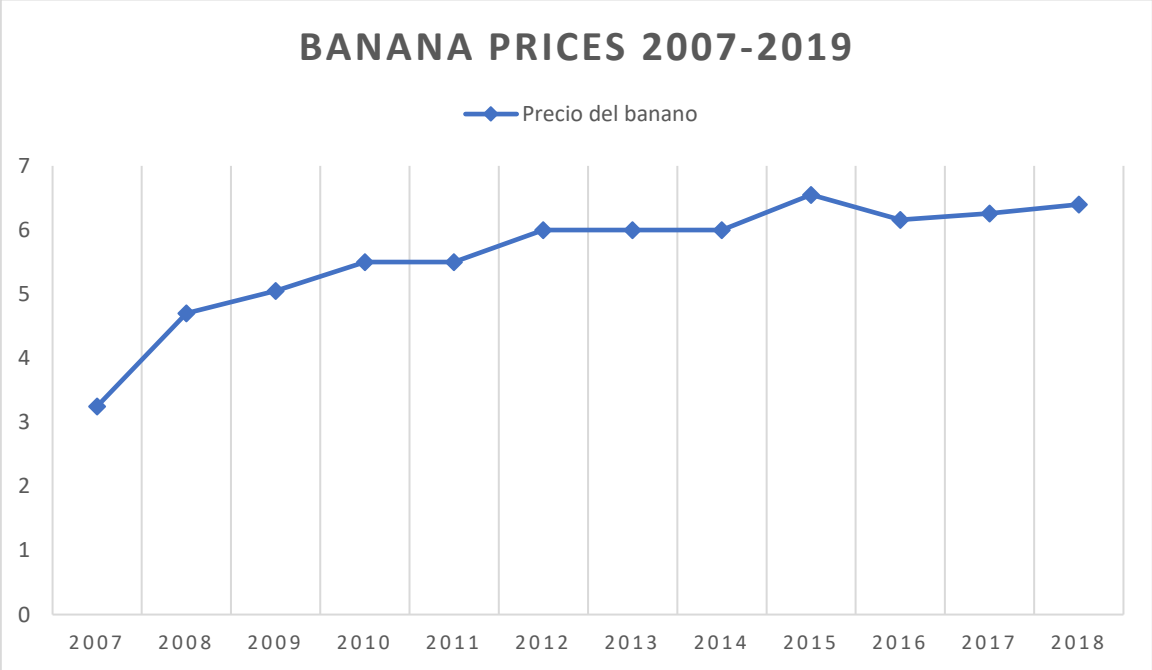
As for Ecuador, in 1999 it suffered the most severe economic setback in Latin America. The economic policy in 1999 caused a devaluation of 216%, an inflation of 52%, and a drop in real

wages of 23%. On the other hand, Ecuador had great repercussions due to dollarization. On January 9, 2000, President Jamil Mahuad announced the decision to dollarize the economy, replacing the national currency at a rate of 25,000 sucres to 1 dollar. However, after the first year of dollarization, Ecuador had serious consequences: it suffered the highest inflation at 96.09%, which caused 17% unemployment, so the level of poverty was extreme.

According to Carlos Larrea (2003), dollarization sought to: reduce inflation rates, encourage foreign investment, bring in foreign capital, and ultimately create long-term economic stability.

In the period 2007-2018, Ecuador presented factors that caused a fall or rise in banana prices.

Figure 7: Banana prices in the period 2007-2019



Source: Central Bank of Ecuador

1.2. Banana export cycles

1.2.1. Banana booms

The banana had its peak in the year 1950, the year in which Ecuador held a leadership position in the international market, representing a quarter of the volume sold. One of the factors that helped Ecuador gain this great advantage was when large banana plantations in Central America were seriously affected by natural disasters, mainly hurricanes due to strong winds and floods. Central American countries were affected by the Panama Disease, a fungal disease present on banana plantations called *Fusarium Oxysporum f. sp. Cubense* that is transmitted through soil and water. On the other hand, the Ecuadorian banana had a great opening towards the US and European markets, so that the demand for bananas improved (C. Larrea et al., 1987).

1.2.1.1. Banana boom

The great banana boom brought great benefits to the Ecuadorian government that favored national integration: the first Latacunga-Quevedo-Manta highway was paved, and two railways were constructed: Bahía de Caráquez to Cuenca and in 1957 the Ibarra-San Lawrence. Ports were also built that facilitated trade, such as the ports of Manta, Esmeraldas and Puerto Bolívar. Similarly, the financial system was strengthened to facilitate exports and the same tasks of banana production. On the other hand, policies were developed that sought to increase Ecuador's participation in the international economy (Acosta, 2006).

To experience the economic growth of bananas, great changes and processes had to be carried out; among them was the inauguration of the air transport service of the Pan American-Grace Airways Corporation between Guayaquil and the United States of America. Without a doubt, it was a great impulse to commercialize the banana. With these factors, Ecuador signed its first contract with the best fruit company of that time called United Fruit Co (Ordoñez, 2012). After five

years, Ecuador had the opportunity to create the National Association of Banana Growers of Ecuador (ANBE), whose purpose was to provide a solution to problems related to the production and industrialization of bananas. In addition, the banana boom brought several benefits, such as the beginning of the process of urbanization of the coast, investment in highways and, above all, credit for small producers. On the other hand, an important mention to Clemente Yerovi, economy minister who was willing to increase the country's production to generate economic growth, making Ecuador the first banana-exporting country in the world (Larrea et al., 1987).

1.2.1.2. Banana crises

Starting in 1965, the Ecuadorian banana began to be displaced from the United States and the European continent. Ecuador suffered a series of stagnation in export volumes, loss of purchasing power, and short-term instability. This caused the exports of other countries such as Honduras, Guatemala and Panama to begin a growth in volume until 1971. Likewise, the comparative advantages arising from the natural conditions of Ecuador were less important, since the Panama Disease reached Ecuador and caused great damage. On the other hand, the behavior of the transnationals was not the same. In particular, United Fruit suspended its activities, but still continued to buy at lower levels than it knew how to buy due to the current crisis (Larrea et al., 1987). In this way, various actors have described Ecuador as a supplier of international reserves and as a producer of fruit for a second-tier market. After the years passed, banana activity no longer had much importance at the national level, so much so that oil activity replaced the banana industry.

Another factor that caused the banana crisis was a plague called Fusarium Race 1 that mainly affects the leaves of banana trees. In particular, it notably affected silk bananas, was the source of income for many Ecuadorian families. Consequently, many families had to return to their land and again try to plant orito and purple bananas. In addition, Fusarium Race 1 is known as one of the pests that spread throughout the country, and more than 40% of crops were affected in the province of Los Ríos (*El Comercio*, 2019b).

Figure 8 Fusarium Race 1

Source: Esther Shimpson

1.3. Competitive impact of banana exports

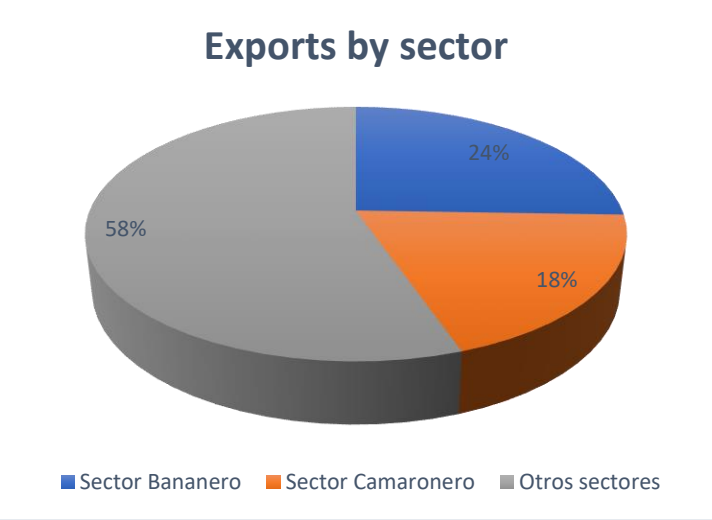
The impact of bananas on the world is quite significant. According to the Food and Agriculture Organization of the United Nations (FAO), Ecuador alone covers more than a third of world banana exports in the world. Its sales are around 80 to 85 million boxes, almost 40% of its total production for the year 2003-2007 (Vásquez, 2017). Therefore, the consumption of Ecuadorian bananas continues to increase worldwide, and thanks to the trade agreement with the European Union, not only the European market is the beneficiary but also other markets such as Russia, South Korea and Dubai are enjoying the quality of the banana, which is a great success for the banana sector. As a consequence, Ecuador is known as the top banana exporting country, due to its quality, exquisite flavor, climatic conditions and soil fertility, which affects the growth of banana exports.

Likewise, the banana activity has had ups and downs. In particular, in 2012 it stopped exporting 25 million boxes due to climatic reasons, which notably affected our banana producers and exporters. As a consequence, other sectors that have a broad relationship with the

banana sector were affected, such as plastic, transportation, shipping companies, agrochemicals, and fertilizers, among others. Therefore, if the banana sector suffers a crisis or decreases its exports, the other sectors will also be affected.

In the same way, in 2015, bananas were considered to be the main non-oil product with the highest export of 24%. The shrimp sector was with 18%, thanks to the technological development that this industry has presented, it has become the second most exported non-oil product (Ministry of Foreign Trade of Ecuador, 2017).

Figure 9 non-oil exports by sector



Source: Collaguazo Guadalupe

Now, the impact that the banana sector has had in the world is also due to the growth that bananas have presented in recent years, due to the fact that producers have increased their productivity per hectare of land; that is, they are producing more boxes for each hectare of land. In addition, it is important to recognize the innovation that has been launched to improve the production processes of Ecuadorian bananas. Another point is the quality certifications that banana producing and exporting companies have. They are between them:

- The Dole company has the Globalgap, Rainforest and Good Manufacturing Practices certifications.
- The company Rey Banano del Pacífico has certifications from Tesco and Globalgap
- The company Frutadeli has the Globalgap certification
- The company Guinafruit has the Globalgap certifications

Regarding the Globalgap certification, this refers to the internationally recognized standard for agricultural production, which aims at safe and sustainable production in order to benefit producers. The Rainforest certification refers to the seal that certifies product made using methods that support the three pillars of sustainability: social, economic and environmental. We can also find the Good Manufacturing Practices certification that refers to the basic principles and general hygiene practices that guarantee that the products have been made in sanitary conditions suitable for consumption. Finally, we find the Tesco certification, which denotes products produced in an environmentally responsible manner (Mora-Córdova et al., 2020).

Finally, it is convenient to know that "Ecuador has an Association of Banana Exporters of Ecuador (A.E.B.E), which represents 70% of the banana exports of the number one country in banana exports worldwide, promoting the competitiveness and sustainability of the banana industry" (AEBE, 2021).

1.4. Concepts of competitiveness

The concept of competitiveness has been used to analyze various fields. However, this time it will focus on international trade. According to Fajnzylber (1988), competitiveness consists of a country's ability to maintain or expand its participation in international markets and simultaneously raise the standard of living of its population. On the other hand, other authors define

competitiveness as a structural characteristic, conceptualizing it as the capacity of a country to produce certain goods, equaling or exceeding the levels of efficiency observed in other economies.

In this context, it is essential to know that the structure of Ecuador's foreign trade has changed; there are several products, both exports and imports, which have entered the international market. In particular, the traditional non-oil sectors have gained such importance that they have become the basis of Ecuador's economy.

On the other hand, it is extremely important to carry out an analysis with respect to Porter's definition (2017), where he defines the concept of competitiveness as the ability of a company to produce and market products in better conditions of price, quality and opportunity than its rivals. Within this context, Michael Porter emphasizes a triad, "environmental regulation, competitiveness and innovation", where the demands of current markets set guidelines on how governments, industries and companies must relate their business activities to the environment, in order to improve the competitiveness of a nation, industry, or business. That is why it is important to create ideas where the production process has to be friendly to the environment. With the environmental factor, nations, and companies can create a strategic plan to obtain more opportunities, avoid losing buyers, be more competitive, and above all, create quality products for the final consumer (Kayleigh, 2018). Taking into account the environmental context, the Ministry of Environment together with the Ministry of Agriculture and Livestock and the Ministry of Health have made efforts to control the proper use of pesticides and proper banana production in order to protect the environment and health of workers, and citizens in nearby areas. Thus, the production of organic bananas has also been encouraged by small producers in order to be friendly to the environment and be more competitive and try to enter more demanding markets (Ministry of Foreign Trade of Ecuador, 2017).

1.4.1. Michael Porter's Diamond Theory

Figure 10 Porter's Diamond

1.5. Banana competitiveness

1.5.1. State of banana competitiveness in Ecuador

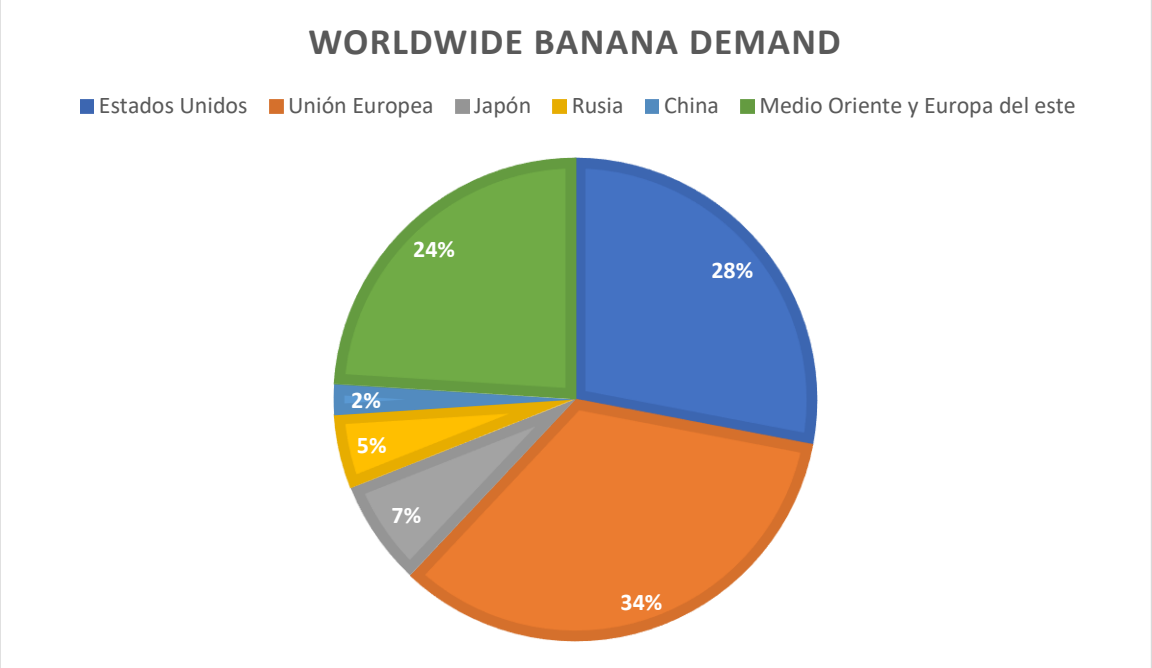
As for the banana sector, the competitiveness of a country is measured in terms of productivity, since it directly influences wages, merchandise prices, and profits on invested capital. The banana is one of the most exported fruits worldwide, and by the gross value of its production, it is the third most important food product in the world. Ecuador is the leading exporting country and third in production bananas. Ecuador's commercial success in the banana sector is due to comparative advantages such as the climatic factor that favors the growth of good quality bananas. On the other hand, this activity, including production, marketing and export, is a source of employment for more than 2.5 million people.

The production and export of Ecuadorian bananas has been improving year after year in a responsible manner due to the help provided by different non-governmental organizations that have mainly focused on the production and modernization process.

Analyzing the current situation of Ecuador's banana competitiveness, in a global context the main exporting countries in banana volume are: Ecuador, the Philippines, Guatemala, Costa Rica

and Colombia, while in monetary values it is in the following order: Ecuador, Belgium, Philippines, Costa Rica and Colombia. As for world demand, it is led by:

Figure 11: Worldwide Banana Demand



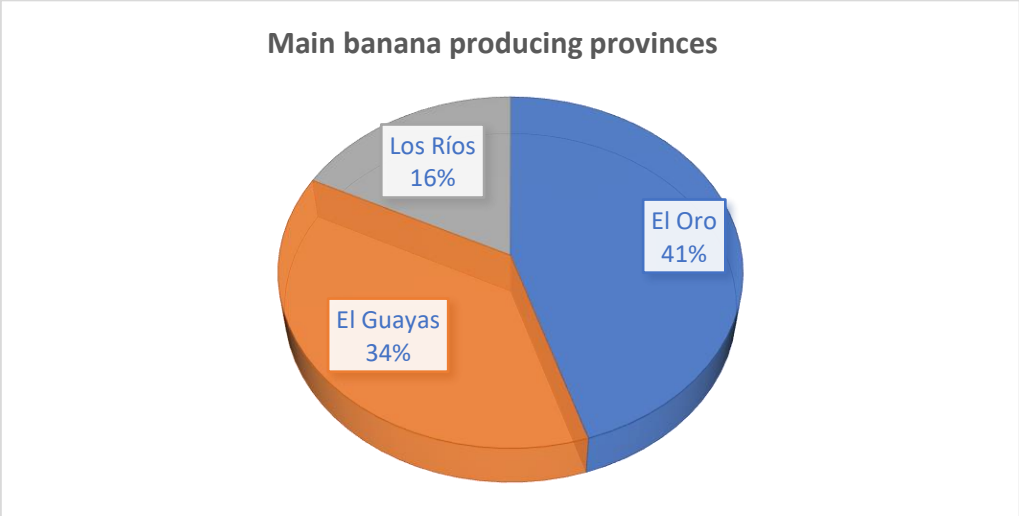
Source: agronegocios

1.5.2. Variables of banana competitiveness in Ecuador

Currently, Ecuador is a country that is dedicated to the export of commodity raw materials, especially bananas. Therefore, it generates costs for the producer (labor, materials and other indirect costs) who cover it with the income they generate when exporting or selling.

The banana activity is of great importance for the country; the areas with the highest concentration of production, being the southern area with the highest production, are El Oro with 41%, Guayas with 34%, and Los Ríos with 16%.

Figure 12: Main banana producing provinces



Author: Collaguazo Guadalupe

- Production Costs: The production costs of the banana sector covers the entire process from the preparation of the soil to the harvest, and maintenance of the crop, all according to the hectares of plantation and export of the product. These costs are considered acceptable. However, it must take advantage of the positioning of the product in the international market and, above all, of the indisputable quality of the fruit that is recognized worldwide (Rosero, 2001).
- Labor: one of Ecuador's strengths is cheap labor, in terms of the banana sector it includes the salaries of workers, day laborers, slicers and all those who intervene in the banana production process. In addition, agriculture is one of the leading sectors of the Ecuadorian economy that generates employment with 29.4%. In Ecuador there are 8,571 producers dedicated to the banana sector who have received training in the care and prevention of pests in the sector so that each year banana exports can be improved.
- Weather conditions: Bananas are part of the group of tropical fruits most consumed in the world and are more likely to bear fruit in hot tropical climates. The banana is available throughout the year. Ecuador has a comparative advantage; it sits at latitude 0° enjoying a

stable tropical climate. The quality of the soil and the climate have benefited the successful growth of bananas; that is, it allows the use of fewer fungicides compared to other producing countries. Regarding the quality of the banana, it must meet the international standard, since it makes the banana safer and more attractive. In addition, they must respond to regulations regarding labeling and marking, which reflects the level of standardization on the farms in order to be more competitive in the international market.

- Own shipping fleet: Since ancient times, certain aspects have been developed that have promoted international trade. From the colonial era, when the port authority of Guayaquil was created, then in 1950 when the port and maritime laws were created, and finally from 1970 until today, which speaks of maritime development that mainly encompasses: the port, shipping, fishing and shipbuilding industries (Tobar, 1993). As of 1958, Ecuador did not have a single linear meter or dock to receive international traffic vessels. However, after 20 years, Ecuador has developed different docking facilities in meters. After 20 years, great progress has been seen; a lot has been done in infrastructure Ecuador is a maritime country par excellence, both because of its location and because of its maritime resources, which has developed its own shipping fleet in order to speed up trade freely with other regions worldwide. Currently, 60% of bananas are exported through the different shipping lines and their refrigerated containers in the country (Fierro Ulloa & Villacres Rojas, 2014).
- Verticality of the sector: it is especially characterized by having different stages of processing and sale. In this sense, the Ecuadorian banana model resembles the McCorrinston model of vertical markets with four stages: inputs, agricultural production, processing and sale. The banana market can be described as an industry that reflects competitive characteristics in the production stage, simplifying the stages into: producers, exporters, wholesalers and retailers, which is feasible at the time of having knowledge of the production process and to be closer to the final consumer (McCorriston, 2001).

1.5.3. Competitiveness Index

The competitiveness index measures a country's ability to provide high levels of prosperity to its citizens. So, it depends on how productively they use the available resources. As a consequence, the competitiveness index measures a set of institutions, policies and factors that define the levels of economic prosperity that can be sustainable today and in the medium term (Sensagent, 2021).

CHAPTER II

2. Analysis of the information of the banana sector of Ecuador

2.1. Identification and characterization of the main banana factors in Ecuador

Within the analysis of the competitiveness of Ecuador's banana exports in the period 2007-2019, the variables to be analyzed are of two types: qualitative and quantitative variables. Therefore, the qualitative data of the following indicators of the Global Competitiveness Index (GCI) were collected: Efficiency of port services; salary and productivity; cooperation and relationship with employees; quality of research institutions; and capacity of innovation. On the other hand, the quantitative data was collected from the World Bank: GDP (Gross Domestic Product), GDP per capita, trade balance, inflation, tons of bananas exported, FOB bananas exported, and the total of oil and non-oil exports. Each of the quantitative and qualitative variables are important because they are directly related to the analysis of banana competitiveness.

2.2. Obtaining data corresponding to the banana sector in the proposed years

One of the database sources for the study is the World Economic Forum, considered to be a global organization that promotes public-private cooperation in different aspects, whether regional or global, thanks to the support of political, business and cultural leaders. Since 1979, the World Economic Forum has published the Report on the Competitiveness of Countries annually that provides information at the world level, from which the Global Competitiveness Index emerges, where 144 countries are evaluated through 12 pillars of competitiveness: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication and innovation (Smith et al., 2015) .

For the analysis of the indicators, six banana producing and exporting countries were selected worldwide. Among them are:

1. Costa Rica
2. Philippines
3. Germany
4. Belgium
5. Guatemala
6. Colombia

Therefore, density graphs will be analyzed in relation to the pillars and indicators, prepared using the statistical program R, which allows data management, calculation, and graphic representation of the same within the 2007-2019 period.

On the other hand, the compilation of quantitative variables such as the trade balance, GDP, GDP per capita, inflation, tons of bananas exported, FOB bananas exported, total exports and total oil and non-oil exports was obtained from the database World Bank data. Analysis and visualization tools of time series on World Development Indicators were collected from official international sources. In addition to that, the World Bank coordinates statistical work and maintains a series of sectoral, macroeconomic and financial databases.

The data of the exported tons of bananas and the FOB exported of bananas were taken from the Trade Map database, which is an interactive web application that presents trade statistics and information on access to markets for the development of companies (International, 2021).

2.3. Analysis of the variables corresponding to the product under study.

Next, the analysis of the quantitative and qualitative variables is presented through a density graph that helps to present in detail the information of each country in relation to each variable.

2.3.1. Analysis of qualitative variables

The World Economic Forum is an international non-governmental organization based in Geneva, Switzerland. Its main objective is to promote public-private cooperation. In addition, it is

focused on giving relevance to certain aspects and factors that promote economic and social development on the planet.

The World Economic Forum produces an annual report on global competitiveness, where it defines competitiveness as the set of institutions, policies and factors that determine the level of productivity of each country. The annual global competitiveness report analyzes the 144 main economies based on 12 pillars (Cann, 2016).

Figure 13: 12 pillars of the World Economic Forum

Source: World Bank

However, the analysis has focused on 6 pillars, specifically: infrastructure, labor market efficiency, business sophistication, macroeconomic stability, technological preparation and innovation, because these indicators are directly related to Ecuador's competitiveness with other countries that are banana exporters, so certain unique characteristics of product marketing were also considered to consider the 6 pillars.

2.3.2. Quantitative and qualitative methodology

The main qualitative variables were obtained from the global competitiveness reports of the World Economic Forum within the period 2007-2019. In addition, several graphs of different types were prepared in order to analyze the position and competitiveness of Ecuador compared to its

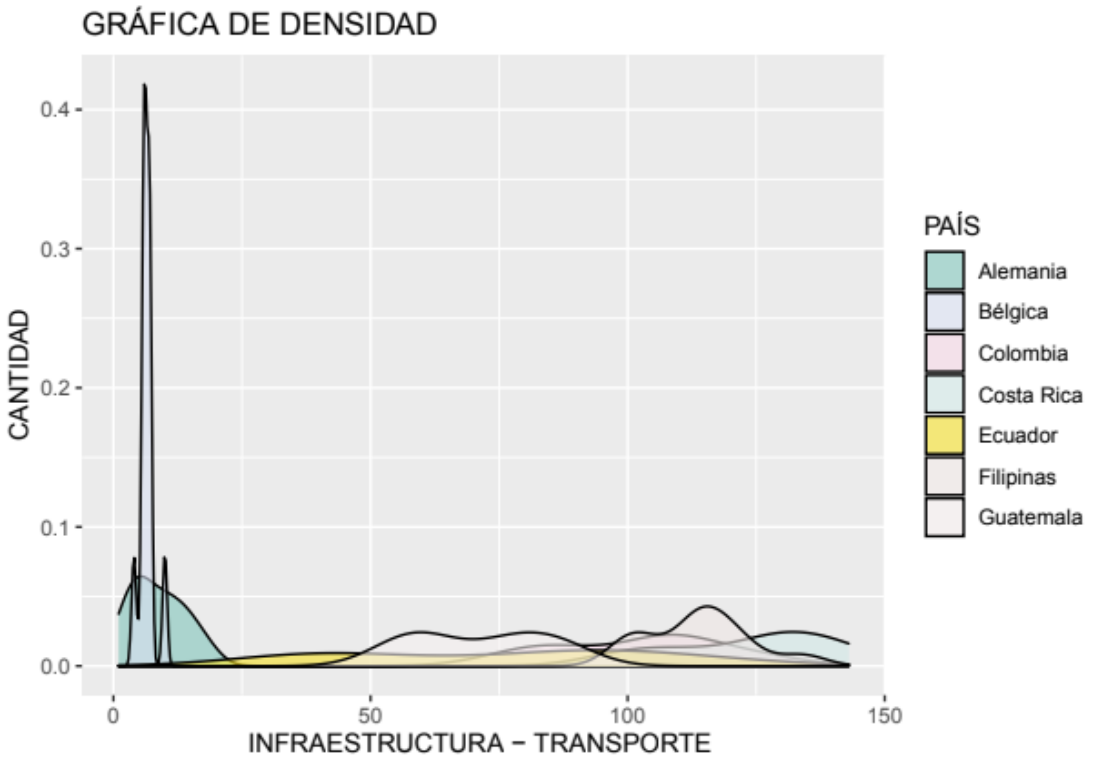
competitors. The importance of the final rating given to the economy of each country helps to broaden the field to be able to analyze its competitiveness.

Each pillar is made up of a series of indicators to which a rating between 1 and 7 is assigned, where number 7 represents the maximum value and number 1 is the minimum value. In addition, in each stage the analysis of different factors is carried out. For example, in the first stage it is assumed that countries compete based on their basic factors, such as natural resources, et cetera. While in the last stage it is explained that the source of competitiveness of the most advanced economies should be based on innovation and business sophistication in order to generate new products or added value (Economic, 2014).

Ecuador is the leading banana exporter in the world, providing a banana with unique characteristics in color, flavor and size, satisfying several world markets. However, it is important to know that Germany and Belgium, the main competitor countries in the sector, are only marketers of the product, not producers.

In graph No. 2, we will talk about the pillar called Infrastructure and Transportation, focusing mainly on the indicator of the quality of the infrastructure of the ports, due to the fact that the export of Ecuadorian bananas to the foreign market is by sea, which will allow analyzing the efforts and works carried out by the government of each country.

Graph 1: Infrastructure and transportation



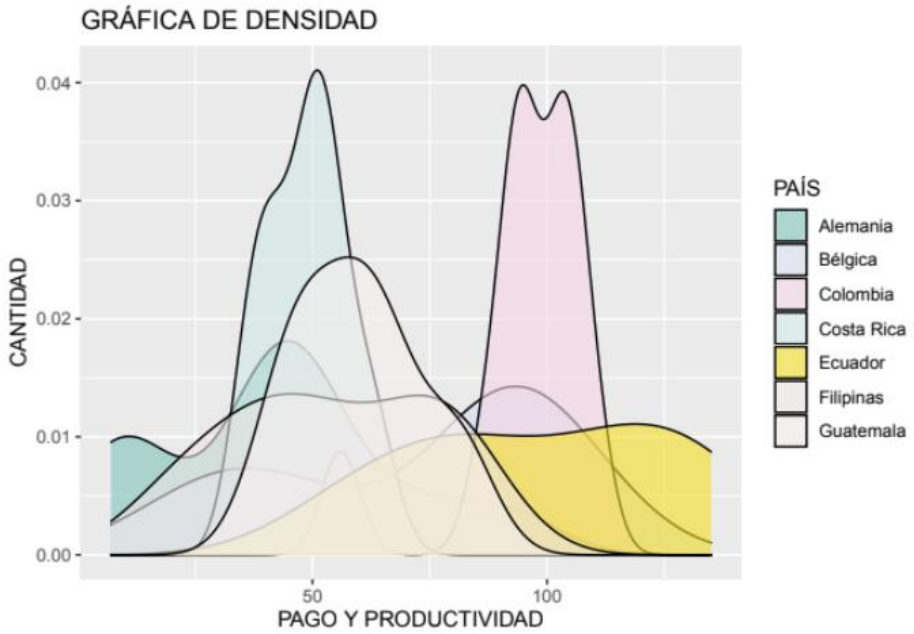
Source: World Economic Forum

Ecuador is a maritime country par excellence, so 90% of trade is carried out by sea, which makes ports and maritime terminals a vector of great importance for the import and export of its main merchandise (UNCTAD, 2021).

In graph 2 "Quality of port infrastructure", we can observe the competitiveness that each country has had during the period 2007-2018. Ecuador is among the first places in the ranking compared to Colombia, Costa Rica, Guatemala and the Philippines, especially in recent years. The importance of Ecuador's infrastructure and transportation is related to the development of productive and commercial activities, in addition to having a geographical advantage. That is, it is closer to its main markets and suppliers, which facilitates the mobilization of merchandise. In addition, from the economy, the transport sector has contributed to the growth of the national GDP by 7%. Ecuador has 10 renovated airports and 13 operating nationwide, of which 4 are

international, as well as 966 km of railways for tourism purposes, along with 7 state ports and 10 private docks and river transport (ProEcuador, 2021). Unlike Costa Rica, which has two more important ports close to the Panama Canal; therefore, maritime transport has become the most used trade route. The Costa Rican government has invested in both road and port infrastructure. However, in no year has it been positioned below the 100 ranking of infrastructure quality due to the lack of equipment in the ports, which causes significant delays in exports. That is, these deficiencies reduce competitiveness and make it less attractive as an investment destination. As well as the Philippines, an island country, conducts 98% of its commercial activities by sea, despite the fact that it has 12 international airports and 20 main domestic airports, and its network of roads and highways has a length of 216,387 kilometers. It ranks below Ecuador in the ranking due to the lack of investment by the Philippine government, which is why it seeks to improve this aspect through various infrastructure projects (Ilipinas, 2022).

Graph 2: Wages and Productivity



Source: World Economic Forum

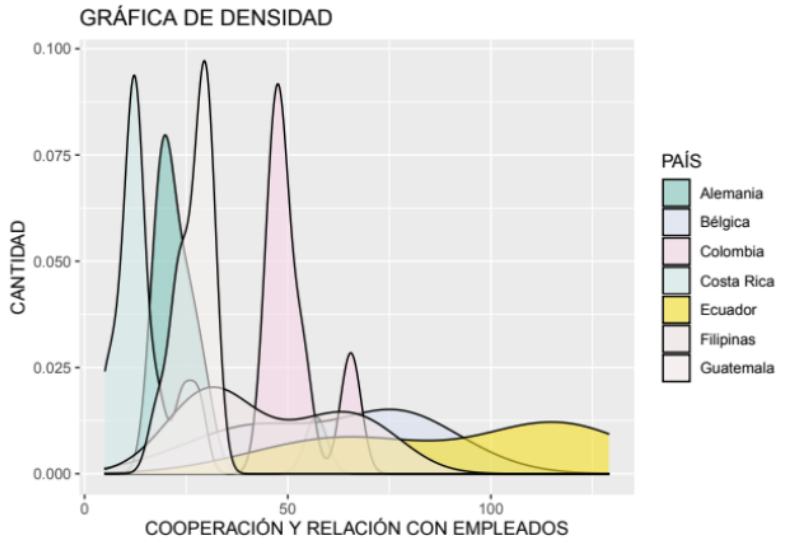
Before carrying out the analysis, we must remember that Germany, Belgium and the Philippines are only banana marketers both in the European Union and in the Asian continent. The countries of Colombia, Costa Rica, Ecuador and Guatemala are clearly producers and main exporters of bananas.

This graph on Wages and Productivity has to do with the analysis of the flexibility of salaries and the cost of dismissals. Ecuador is located between the 30-140 ranking in relation to the Wages and Productivity variable because the universal insurance of workers has been guaranteed, as well as labor reforms that prohibit child exploitation, and agreements are being created for the eradication of child labor jointly with international organizations. On the other hand, the payment of the basic salary has been implemented, and what is more, Ecuador has one of the highest basic salaries in Latin America. According to the National Council for Labor and Wages, which is in charge of the social dialogue on labor policies and resolves the settlement of the SBU (Unified Basic Salary) for each year, within the 2007-2019 period, the SBU has been increasing progressively; currently the unified basic salary is $400. On the other hand, the constitution states in its Art. 328 that the remuneration will be fair, with a decent salary in order to cover the needs of each person (El Universo, 2020).

It is also important to know that one of the objectives of the development plan is to promote productivity and competitiveness for sustainable economic growth in a redistributive and supportive manner; for which reason, it has been working on different aspects such as increasing the national agricultural productivity index, increasing length of the state road network, among other activities (INEC, 2021). This is in contrast to Costa Rica, a country that is in the 30-70 ranking, that is, it has an advantage over Ecuador because it has managed to achieve significant socio-economic progress because it has focused on strengthening its policies to recover fiscal sustainability, structural policies to boost productivity, and inclusion.

On the other hand, Guatemala, a country that has been recovering economically every year in relation to the aspect of payment and productivity, has focused on promoting and guiding changes to increase productivity and competitiveness by strengthening exports and growth of the internal market. Some foreign exporting companies had a better performance in job creation since there is easy access to financing, so they also saw the need to acquire new technologies that make them more productive (Goleman et al., 2014). So we can also talk about the Philippines, a country with a large economy and well-managed inflation. However, the evil that harms this country is the inequality that exists among citizens; that is, wealth is concentrated on one side while other citizens have to face the harsh reality of poverty. In addition, it is affected by overpopulation, which will harm the labor factor in the long term since, if numerous jobs are not created, inequality and poverty will continue to expand in the country.

Graph 3: Cooperation and relationship with employees

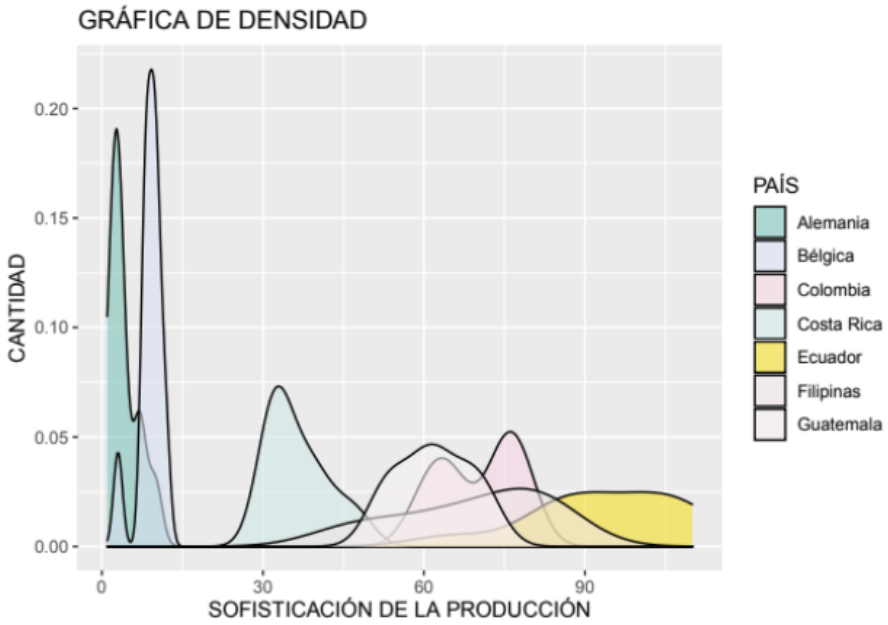


Source: World Economic Forum

This indicator has to do with the employer-employees and employees-employee's relationships. In this graph it can be seen that Ecuador is ranked between 43 and 129, which places it below Colombia, Costa Rica and Guatemala. Ecuador has some employment laws; for example, there are contracts which must guarantee a safe work environment without abuse of word or deed. In addition to that every employee must be affiliated with Social Security. However, in Ecuador 58% of workers are not affiliated; lack of economic resources or employer evasion are some of the causes of non-affiliation. In contrast we have Costa Rica, a country that is above Ecuador because the relationships between employees and employers are based on trust and respect for labor laws.

The present loyalty between the employee and the employer goes hand in hand with the organizational commitment which facilitates the companies' productivity improvement. Moreover, there is a principle of equality and the principle of non-discrimination; in addition, some of the benefits that employees have are a fixed salary, annual bonus, annual vacations, and retirement due to permanent disability. The Philippines has been improving its position in the ranking; in recent years it is increasingly among the first positions due to the fact that the constitution and the labor code guarantee the right to self-organization, which includes the right to form, join or help labor organizations, so that they can bargain collectively and participate in some legal activities (Zanini, 1999).

Graph 4: Production sophistication



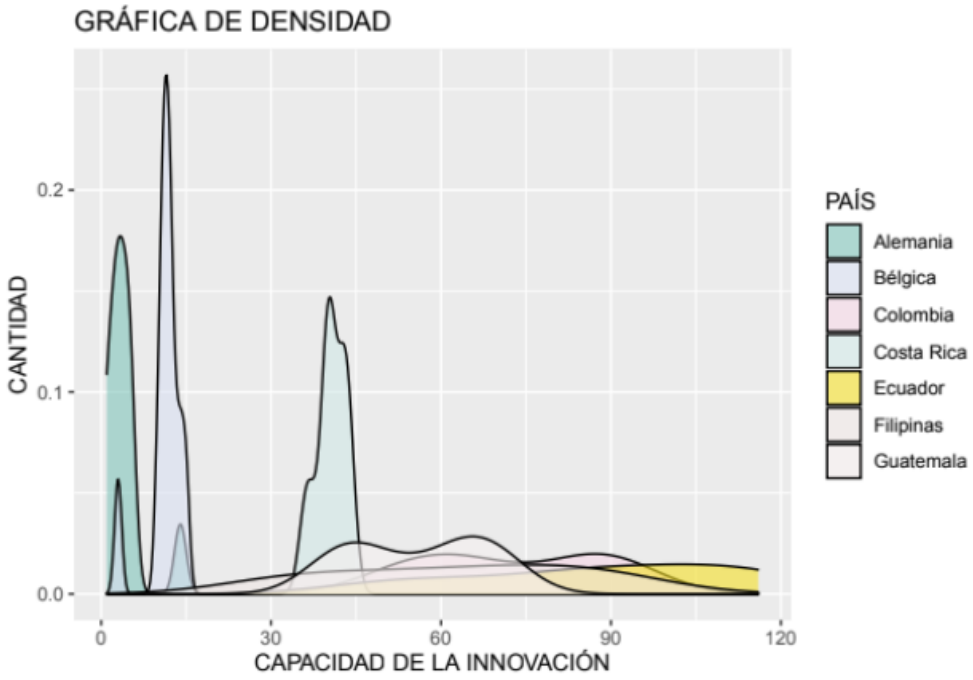
Source: World Economic Forum

The Sophistication of production indicator is related to two important aspects: the quality of the commercial networks of each country and the quality of the operations and strategies of the individual companies.

In this graph, we can see that Ecuador is between the ranking of 55 to 100 within the period 2007-2019; that is, the other countries such as the Philippines, Colombia, Guatemala and Costa Rica retain a certain competitive advantage. This is despite the fact that Ecuador has promoted strategies for the commercialization of food from some peasant organizations in order to encourage more equitable commercial networks among small and medium producers. (INEC, 2021) However, with respect to the operations and strategies of the companies, they must face the lack of financing, planning and innovation in their technology, which makes them less competitive in this field. In contrast, we have Guatemala, which is within the 50-80 ranking because they have worked to

promote the quality of Guatemalan products to increase their competitiveness and the consumption of their products. In addition, it was reiterated that the country has sophisticated products to compete in international markets (Government of Guatemala, 2020). Colombia has remained stable in recent years despite changes to take advantage of business sophistication, such as the implementation of new technology in industries that have not performed efficiently. On the other hand, there is the Philippines, which is located between the 30-96 ranking thanks to the different foreign firms that have accumulated knowledge and skills in order to develop collective skills to produce more sophisticated and more competitive goods in the international market. As well, the sophistication of exports has been prioritized, in particular the packaging of products to generate a positive effect on the country's economic growth.

Graph 5: Innovation capacity



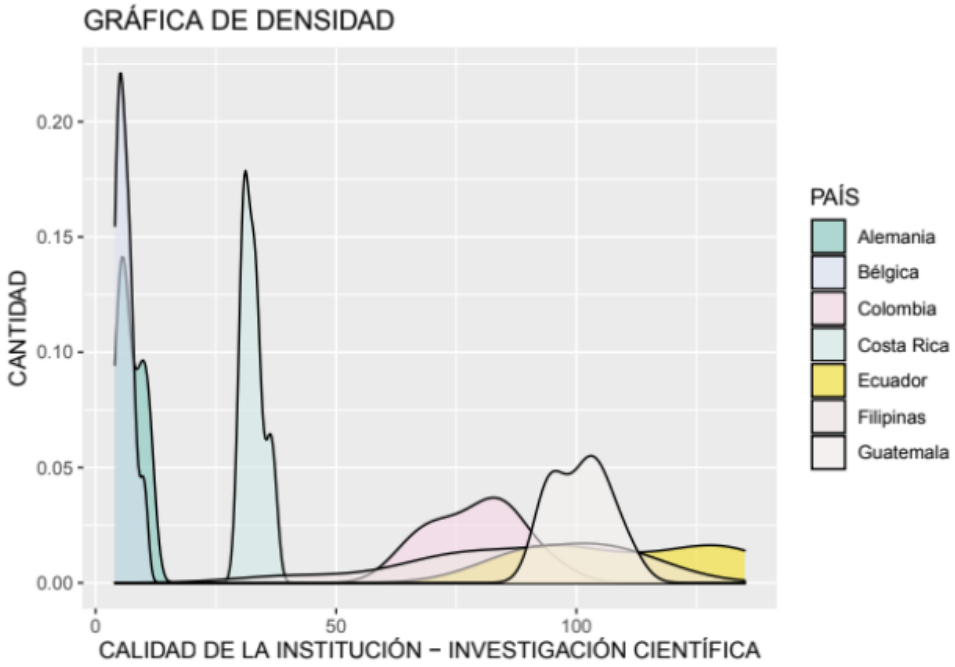
Source: World Economic Forum

One of the main factors to consider for a productive sector to function properly is to stay innovated. In the graph it can be seen that Ecuador is within the 32-117 ranking within the 2007-

2019 period. Ecuador has been forced to introduce innovative products to the market or innovate the production chain process in order to obtain a competitive advantage to improve profitability. In the markets, there are several companies that have the capacity and capital to remain innovative; however, for other companies it is difficult to achieve that degree of innovation because the competition is too high. Some Ecuadorian companies have low capacity for innovation; among them 76% have characteristics of high competition. Simply put, more market share means more innovation (Warrior, 2019). The Philippines in recent years has improved its position in the ranking. Philippine innovation depends on the investments that are processed within the country; the support from the government towards small, medium and large companies is one of the reasons why the Philippines has a good capacity for innovation (Arayata, 2021). In relation to Colombia, which is located within the 35-100 ranking, the best companies that have the capacity for innovation, research and focus on results are located here, and are the main reasons why the country is in that position (Global, 2020). A differentiating factor is that a different study is carried out, and effort is needed for each sector since each one presents unique challenges. In contrast to this Costa Rica, the second most innovative economy in Latin America, the incorporation of knowledge, and considering innovation as the basis of the country's economy are some of the reasons why Costa Rica obtained this ranking. Foreign direct investment has been one of the fundamental pillars that has contributed to the country's position in the field of innovation. (Costa Rica, 2013).

Guatemala is also one of the countries that competes with Ecuador; this country has remained stable in recent years. However, one of its greatest challenges is human capital, as well as the production of knowledge and technology that are limiting the capacity of the country to innovate (Orozco & Valdivia, 2017). One of the great challenges that must be faced is to invest more in education since only 2.8% is allocated to this field, while countries like Costa Rica dedicate 7.4% of GDP (Shoe, 2019).

Graph 6: Quality of the scientific research institution



Source: World Economic Forum

In this graph, it can be analyzed that Ecuador is within the 57-120 ranking; Ecuador has several universities that are dedicated to scientific research that encompasses different topics. The San Francisco University that is located in the city of Quito is recognized by the number of articles published in Scopus. However, lack of investment in research and development and low private investment in scientific projects are some of the reasons why it represents a low percentage in relation to world production (Scielo, 2020). In contrast, Costa Rica has an advantage over Ecuador since it is within the 20-40 ranking. Public universities are the most involved in scientific research. The University of Costa Rica, in particular, is the main institution that generates quality information in the country and in Central America. Its most significant contributions are related to the generation of knowledge transfer for problem-solving and innovation. Thus, it also allocates a part of its budget for the financing, construction and equipment necessary to carry out excellent research

on different changes (Universidad de Costa Rica, 2021). Colombia is located between the rankings of 52-102. One of the challenges that it has had to face is the lack of investment in the field of research by the government. In 2018, Colombia could not be part of the Organization for Cooperation and Economic Development, since only 0.25% of the national GDP was invested in this field, which makes it less competitive and in the same way affects a quality future for the country (University, 2019). The Philippines presents extensive scientific and technological advances; the Department of Science and Technology (DOST) is the main actor since it has several consulting agencies in various fields. Several Filipino scientists have contributed to different studies in the world. Finally, there is Guatemala, which invests 0.029% of its national GDP in research and development activities. Private investment is almost nil, which harms the country's competitiveness in the field. The low investment in education by the Guatemalan government also affects the country's competitiveness and innovation (Lemarchand, 2017).

Within the analysis of the 2007-2019 period, it is important to emphasize that the World Economic Forum since 2018 has changed the study methodology, unlike how it has been studied in previous years. The 12 pillars are:

1. Institutions
2. Infrastructure
3. Adoption of Tics
4. Macroeconomic stability
5. Health
6. Skills
7. Goods market
8. Labor market

9. Financial Market

10. Market Size

11. Business Dynamism

12. Innovation Capacity

It should be noted that for the year 2019, 103 specific variables were measured, of which 47 correspond to surveys carried out by various businessmen and 56 are pure data and statistics taken from official sources of each economy. This means that the 57 data correspond to 70% while 56 represents 30% of the index measurement (World, 2020).

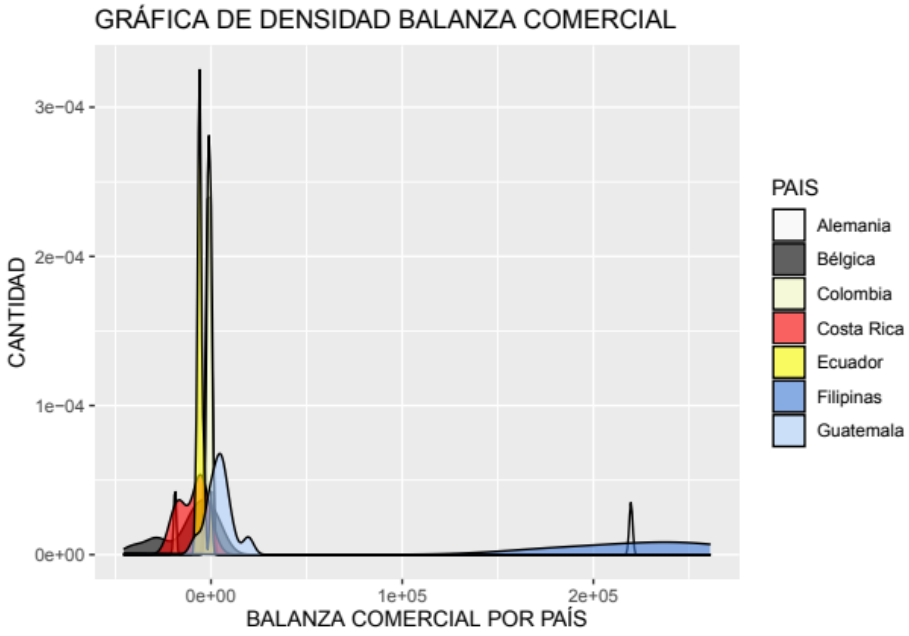
On the other hand, the most important thing to highlight this year is that countries such as Colombia and Costa Rica were the most competitive in Latin America; that is, they held the top positions in the index, unlike other countries in the region. In particular, Colombia ranked 57th while Costa Rica ranked 62nd.

2.3.3. Analysis of quantitative variables

Within the study, there are quantitative indicators that allow an effective analysis of the competitiveness of Ecuadorian bananas with the rest of the competing countries. The graphs were obtained using the computer tool for data analysis R, from the data obtained from the publications issued by the World Bank, Trade Map, and the Central Bank of Ecuador.

The variables considered for this analysis are: Trade Balance, GDP per capita (individual product), GDP (Gross Domestic Product), and Tons Exported because they allow us to acquire information and expand knowledge about the transversal behavior of each of them as well as their relationships and the importance in the economy of the countries.

Graph 7: Commercial balance by country



Source: World Bank

Analyzing the trade balance is important, because it represents the economic record made by a country where imports and exports of merchandise are collected. That is, through the balance you can know the difference between the merchandise that leaves a country and the merchandise that a country acquires (Digital, 2019), which has been carried out at a given time in order to know the result of its behavior in the analyzed country. When there is a positive result, it is considered a surplus; conversely, if the result is negative, it is considered a deficit. In the first case, it means that exports were greater than imports, a result that is intended to be achieved over time, and considered ideal for the country for the income it represents. This is in contrast to when there is a negative result or deficit, which means that imports were greater than sales abroad. This result can be considered necessary in some cases to satisfy domestic demand with outflows rather than income; it can also be considered unfavorable to a certain extent because the country will have to compensate this deficit through mainly public rather than private debt (Digital, 2019).

Graph 8 "Trade Balance" expresses the variation of this variable for each of the countries within the period 2007-2019 considered in the study. For the year 2007, Ecuador presented a surplus caused by price increases in exports, even when the volume of exports was reduced by 3.2%. It is worth mentioning that non-oil exports such as oil showed significant growth for the economy of the country (ECB, 2008). For the year 2010, there was a commercial deficit; the import of fuels and lubricants were the main products. However, considering that the oil trade balance presented a trade surplus, the non-oil trade balance did not have the same behavior according to its number of sales.

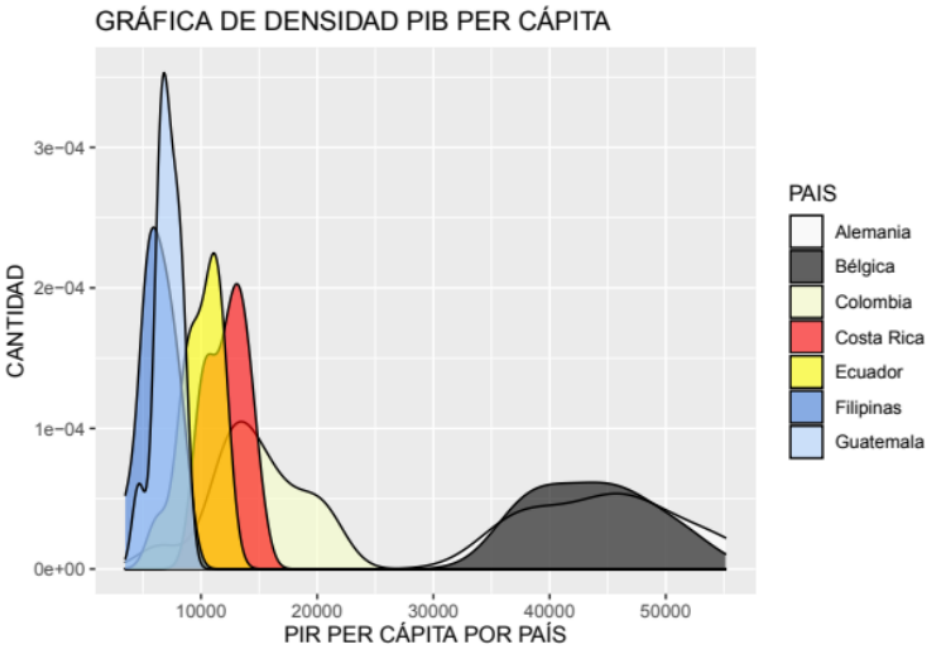
For the year 2012, the country that recorded a trade surplus was Colombia with $4,916,000 million dollars, mainly due to the strengthening of trade negotiations for bananas with countries such as Panama, the Netherlands, and Ecuador, among others. Contrary to the year 2017, it presented a trade deficit due to the lack of confidence in the international market, an unstable economic outlook, and above all, the increase in hydrocarbon exports, which represented a drop of 44.32%, unlike previous years.

For Costa Rica, considered another of the competing countries for Ecuador, for the year 2008 it registered a commercial deficit due to the increase in imports of goods and materials, and a decrease in the exports of its main products, the banana. For the year 2015, this country exported 9.05% of bananas, but for the years 2017-2019, medical instruments were the ones that led exports with 20.08%. Regarding the Philippines, a country that contributes significantly to the economy of the Asian continent, for the year 2009, it registered a lower trade deficit than in 2008, which means that imports of circuits, petroleum oils or bituminous minerals were constantly increasing. In fact, electronic products represent 31.6% of imports (OEC, 2021).

Within the analysis carried out between the period 2007-2018, it has been shown that Germany and Belgium are great competitors of Ecuador in the commercialization of bananas, taking into account that both aforementioned countries are not producers but importers and

marketers of the product, due to the number of commercial agreements that they have with other countries and their notable participation in the trade given by banana exports within the European continent, becoming economically strong countries (Econ & Unidos, 2021).

Graph 8: GDP per capita (PPP)



Source: World Bank

Analyzing the variable GDP per capita is fundamental since it is a central indicator of economic performance commonly used as a measure of economic well-being, despite some of the recognized deficiencies. That is, it is the relationship between the quantity of money of goods and services in relation to the number of inhabitants of each country (Organisation for Economic Cooperation and Development (OECD, 2013). However, GDP per capita does not measure equal distribution within a nation, so there may be some countries with high incomes, but they may have problems of poverty and inequality.

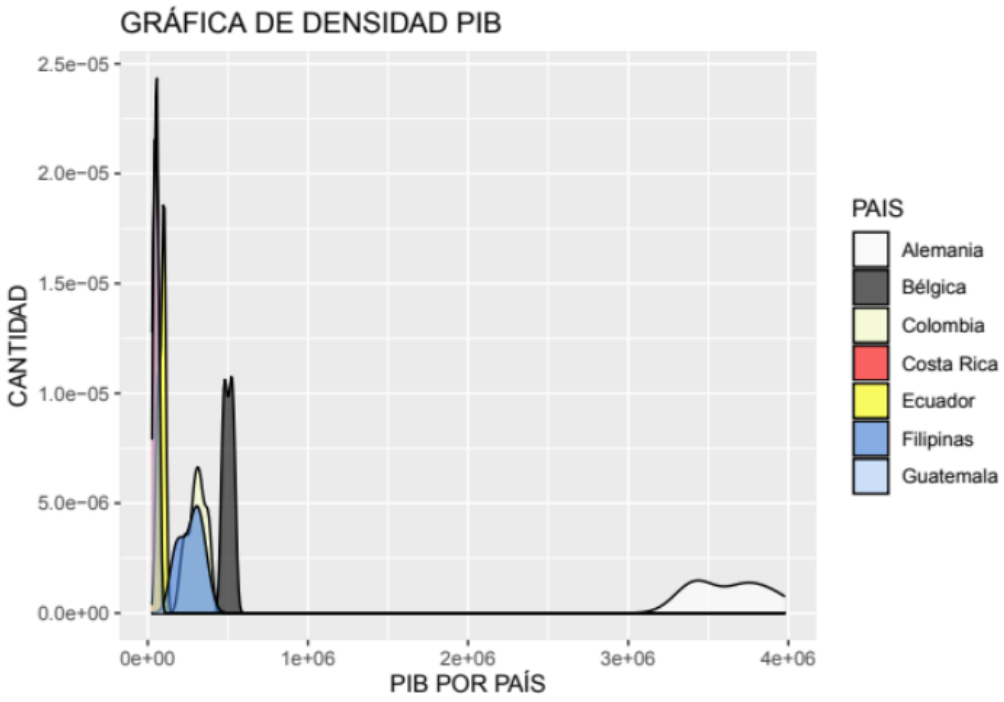
To exemplify the aforementioned, we have the case of the Philippines, a country that has a low standard of living and ranks 127th out of the 196 countries that make up the ranking of GDP

per capita. Although it has an excellent macroeconomic outlook, it is considered one of the most unequal countries in Southeast Asia due to the high inflation that affects the country. In fact, 40% of the population lives on less than two dollars (Vanguardia, 2018).

For its part, Costa Rica has been a upper-middle income country for the last 25 years; it has presented economic growth due to an outward-oriented strategy and foreign investment (Mundial, 2021). The per capita GDP of Costa has been in constant growth since 2007, registering $6,103,742, while for the year 2018 it registers $12,495,424. As a result, it ranks 63rd out of 192 countries in the GDP per capita ranking (World, 2021). At the same time, it is important to know about the aspect of social inequality and poverty; for the year 2011 in Costa Rica, poverty affected 21.6% of households, which is why it was ranked number 4 in the poverty index ranking, and also presents negative results in terms of social inequality (Montero Cordero, 2017).

On the other hand, Guatemala, considered one of the largest economies in Central America and one of the countries with the largest rural population in Latin America, suffers from one of the highest levels of inequality on the planet. For the year 2008, for example, a lower GDP per capita was registered, due to a low level of wealth, unlike the other countries, since economic and social inequality is greatly affecting the economic structure of the country. While for the year 2015, there was an increase in GDP per capita in relation to the previous year, experiencing an improvement in areas such as education and training in different productive sectors in order to improve the low level of wealth in the country (OECD, 2018).

Graph 6: GDP



Source: World Bank

According to the Central Bank of Ecuador, the Gross Domestic Product (GDP) considers the value of end-use goods and services generated by economic agents during a given period (Ecuador, 2021). The GDP is one of the most important indicators to have knowledge of the size of an economy; that is why by analyzing the GDP several conclusions can be obtained, such as, if an economy needs an economic reactivation, if the economy is in danger or an approximation of inflation, among other factors. Because, through GDP, the impact of variables such as monetary or fiscal policy can be analyzed.

Ecuador is a country with a small dollarized economy dependent on oil revenues. In 2008, Ecuador presented a significant growth of 6.52% in relation to GDP. Despite the crisis that affected several Latin American economies, public and private investment were the factors responsible for growth (El Universo, 2009). However, for the year 2016 there was a fall of 1.5% in relation to GDP,; this was, cataloged as one of the largest falls that Ecuador has faced since it adopted

dollarization. It should also be mentioned that the the fall in the price of oil was the main cause of the contraction of the Ecuadorian economy (BCE, 2020).

For the year 2017, the economy of Ecuador had a growth in real terms of 3.0% caused by final consumption expenditure of households, final consumption expenditure of the general government and exports. Indeed, exports grew by 0.6%, contributing positively to the variation by 0.18% percentage points, including the growth of bananas, coffee and cocoa (BCE, 2018). On the other hand, in 2009 the economy of Costa Rica was affected by a slowdown in the world economy and in particular by the recession in the United States. In addition, gross domestic investment and exports were significantly reduced, which is why the unemployment rate increased and stood at 7.8% at the national level. While for the year 2010 the situation improved, real GDP grew by 4.2%, the recovery was due to the high dynamism of exports and the moderate expansion of consumption and gross domestic investment (BCE, 2010). Costa Rica stands out because it acted positively, generating a greater external demand for goods and services, an increase in tourism, and greater flows of foreign direct investment (ECLAC, 2011).

Guatemala, for its part, presented different scenarios for the year 2009, and faced great challenges in order to counteract the damage caused by the international financial crisis that reduced its economy by contracting it by 1%. This is compared to 2008, a year that presented a growth of 4% and was around 3.4% of GDP, which continues to grow as a positive result of the application of reforms and policies adopted by the government in subsequent years (United, 2009).

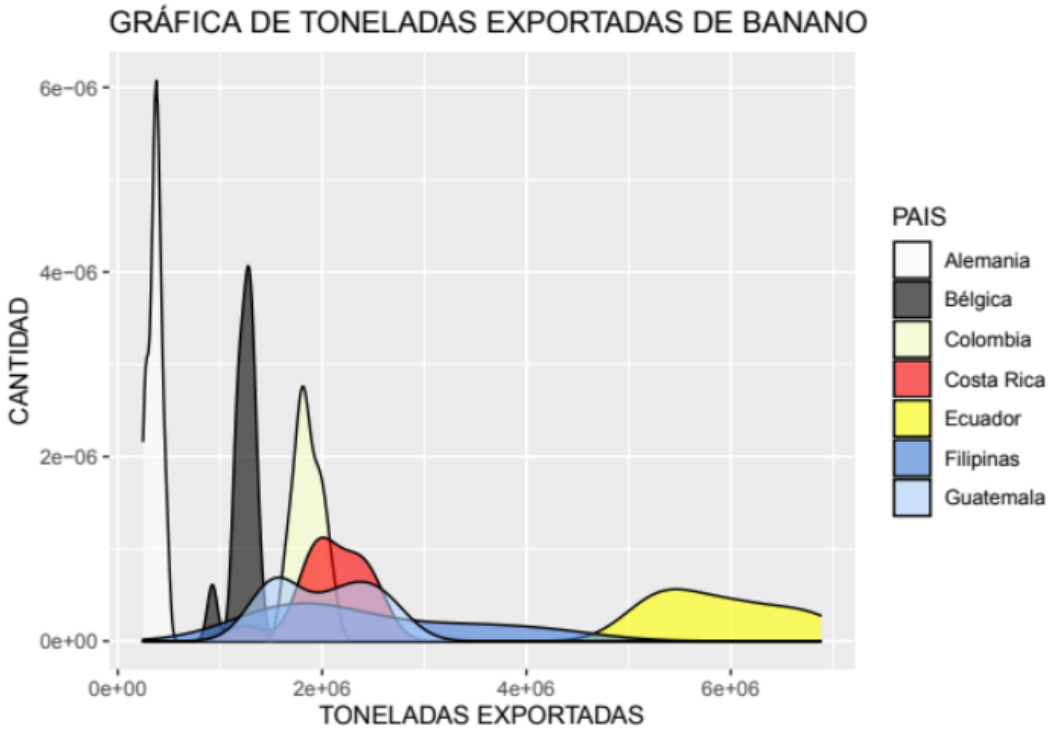
For the year 2014 it also presented a growth given by exports and high private consumption (Inflaci, 2015). Thus, for the year 2014, according to ECLAC, a growth of 4.0% of the GDP is expected, surpassing the previous year. The growth in the value of exports was 7.0%, since exports of non-traditional products grew by 11.2% while traditional products decreased by 3.0% (Inflación, 2015).

In a similar way, Colombia for the year 2011 presented a growth triggered throughout its economic history despite external factors, the growth level was 6% more than the previous year; this was thanks to the volume of traditional exports, since it managed to place inflation within the established range. At the same time, the macroeconomic performance developed positively, making it possible to reduce the fiscal deficit (C, 2011). Unlike in 2016, public finances were affected both by the drop in income from the sale of oil and by the rise in debt due to the depreciation of the Colombian peso. Revenues represented only 15.0% of GDP, that is, 1.1 percentage points from the previous year (BCE, 2010).

On the other hand, the Philippines, one of the most important countries on the Asian continent, contributes significantly to the Asian economy. For the year 2009, the Philippines had to face an increase in public debt, which reached 49.81% of the Philippines' GDP, which meant a fall of 0.2 points compared to the debt of the previous year (Macro, 2022). However, in recent years, the GDP has been constantly growing thanks to the proper development of the services sector, which is more relevant since it accounts for 55% of the wealth of the Asian tiger. Similarly, the agricultural sector contributes to the growth of the Philippine economy.

The fishing sector also contributes significantly to the development of the economy, which is why in recent years it has made investments to innovate this sector. Indeed, this sector contributes 2% to GDP and directly employs 1.5 million people. Among its main exports are: integrated electronic circuits, automobile parts and accessories, electrical wires and cables, becoming the 32nd largest economy in the world in terms of GDP (OEC, 2018).

Graph 10 Banana exports in tons (2007-2019)



Source: Trade Map

The weather conditions have favored the cultivation and production of bananas; one of the most cultivated variables is the Cavendish type, which is why it has become the most important agricultural activity in the country's economy. For the year 2008, Ecuador exported 5,360,486.0 tons of bananas; the price of a box of bananas in that year was $4.70, according to the Undersecretary of Agriculture. From this, bananas represent 42% of total non-oil traditional exports.

For the year 2016, the production was 6,176,269 tons per hectare, mainly in the province of Los Ríos; the largest banana production is concentrated with 43.23% of the national total (ESPAC, 2014). Thus, a third of world banana exports originate from Ecuador. For the year 2018, the area dedicated to banana production was 161,583 hectares, registering a growth of 2.2%, where the

provinces of El Oro and El Guayas account for 80.9% of the total area harvested, and Los Ríos is the province that is most dedicated to banana production at the national level (INEC, 2020).

Costa Rica is one of the three most important banana exporters in the world, the Costa Rican banana is recognized nationally and internationally, due to the great effort it has made to investigate how to increase banana productivity and above all to mitigate the use of chemicals in the plantations (Corbana, 2022). Less than 1% of the national territory is dedicated to banana production. In particular, the province of Limón is the place where Costa Rican bananas are mainly produced, considered the best in the world.

In Colombia, bananas are the third most exported product after coffee and flowers. Currently, Colombia is the fifth banana exporter, as it seeks to increase export volumes to the international market, by increasing productivity. The Colombian banana sector is made up of 35,139 agricultural production units; the share of agricultural GDP is 5.3%. Likewise, the subsector generates more than 293,648 direct and indirect jobs (Vargas et al., 2017).

In recent years, Colombian exports have improved due to the better conditions of the plantations due to climatic phenomena. In particular, in 2017 it was estimated that world banana exports would reach 18.1 million tons, which would mean a significant recovery in relation to exports in 2015, mainly caused by the weather. In the same year, exports exceeded the value of the year 2016 with approximately 1.88 million tons of bananas (Finagro, 2018).

However, the area planted on average in recent years is 47 thousand hectares, of which 3% is concentrated in Urabá and 27% is located in Guajira. In fact, within the period of 2007-2019 there has been a growth in the planted area; for example, in 2008, the planted area was 44 thousand hectares, unlike in 2018, which was 49 thousand hectares. Within this perspective, the banana sector reached the highest levels of production. In particular, if we analyze the year 2007 when the

production was 1,635,000 million tons, while for the year 2017 there was a notable growth of 1.96 million tons, that is, 98 million more boxes.

In recent years, Guatemala has begun to have growth within the banana sector, becoming one of the sources of export income, which has allowed it to be one of the most stable countries in Latin America due to the increase in the productivity of the farms. In this case, for the year 2012, the supply of bananas in Guatemala was 59,391 hectares of cultivated bananas that produce 2.4 million tons, unlike Ecuador, which exported 5,205,352.0 tons. For example, in 2007 the main export product was coffee, even roasted or decaffeinated, with a share of 8.43% of total exports, followed by bananas with a share of 5.28%.

Within the year 2019, bananas had a 12.5% share of the total planted area; the total planted area was 190,381 hectares, it should be noted that the province with the highest participation was Los Ríos (INEC-ESPAC, 2020). One of the reasons why Ecuador has a notable advantage in its exports is because at the beginning of 2019, it was the first country to shield itself from the Fusarium plague, transmitted by a fungus that is capable of damaging the vascular system of the plants. This is unlike Costa Rica, which has not been able to control the outbreak of the plague, so the plantations continue to be affected and it also affects the export of quality bananas. In the same way, banana cultivation is extremely important for the country's economy, so that the planted area was 53,056.3 hectares; therefore, 98.4% of the total production was for sale to the foreign market (National Institute of Statistics and Geography, 2020).

2.4. Determination of findings

It has been determined that Costa Rica, Colombia and Guatemala are the main most competitive countries in the export of bananas to Ecuador. Within the period 2007-2019, they have increased the supply of bananas to the foreign market. However, these countries have to face various adversities, which have not allowed them to continue progressing in the growth of the sector. Among the main problems are the great impact of climate change, changes in temperature, and pests affecting banana

production by damaging the texture, flavor and size of the banana, since this does not allow the export of quality bananas. With respect to Ecuador, the increase in its production is thanks to its location and its climate. As we have mentioned before, to grow a banana of excellent quality, certain requirements must be met, in particular, the temperature must be adequate so that the crops are not affected by diseases and pests. In the same way, it is important to know that the banana sector is of great contribution to the growth of the economy and represents a significant part of Ecuador's GDP, so much so that it has become the main banana exporting country in the world. On the other hand, countries like Costa Rica, Colombia, and Guatemala have invested in different areas of the sector, such as production, trade, and logistics, among others, in order to generate added value to their bananas and thus continue to be strong competitors in the banana sector.

CHAPTER III

3. Proposal for a competitive model of the banana sector

3.1. Variables of competitiveness of the Ecuadorian banana sector.

Within the competitive framework, when Ecuador is compared to other producing countries such as Colombia, Guatemala, Costa Rica, it has an advantage in the variable "Quality of port infrastructure" because within the period 2007-2019 it has remained in the top positions of the ranking of the World Economic Forum. As mentioned in previous chapters, Ecuador is a country that manages its international trade by maritime transport. The export of bananas is carried out through maritime ports; it has more than 4 ports, with Port Bolívar being the main port dedicated to the export of bananas. That is why Ecuador through the Ministry of Transport and Public Works have worked together in order to enhance the activities of each port by investing in various projects. For example, in the port of Manta it is in the concession process; currently the infrastructure is being improved. Also, in the port of Esmeraldas, an investment of 25,000,000 million dollars was made to improve the port and improve its operability, and finally it seeks to strengthen the Puerto Bolívar as the main fruit port (Castro, 2015).

Indeed, the location aspect must be taken into account, since it is one of the greatest strengths that Ecuador possesses, since the climate directly influences the development of the other qualitative and quantitative variables. Therefore, Ecuador has become the leader in exports worldwide.

3.2. Relationship of the competitiveness variables of the Ecuadorian banana sector for the international market

After obtaining all the qualitative and quantitative information, through the development of the previous chapters, it was possible to determine that one of Ecuador's strongest competitors is Costa Rica. In recent years, the Costa Rican government has begun to invest more in the

agricultural sector and specially to improve the infrastructure of the country's banana sector. Banana production is an equally important activity for Costa Rica; it is moreover one of the country's main sources of income, which is why it is among the three largest banana exporters in the world.

One of the great advantages is that Costa Rican bananas have a geographical indication called the Costa Rican banana, which allows the origin of bananas to be known to all consumers worldwide; this means that consumers can be informed on the characteristics and quality of Costa Rican bananas. In addition, another of the strengths regarding the geographical indication is that it allows knowing the strict social and environmental commitment of the production criteria. Therefore, thanks to the establishment of this indication, Costa Rican bananas can be differentiated from bananas of different origin (WIPO, 2022). In addition, it is important to know that this characteristic is related to the variable sophistication of the production process, which gives it a plus unlike other countries. Likewise, with the aim of improving the quality of bananas, innovation was launched to carry out an analysis of the soil of several farms in the country through technological innovations to increase the quality and health of the soil, since this will help improve the productivity of banana plantations (Pocasangre, 2009). In a few words, Costa Rica is one of the main competing countries at the level of production and export in Latin America.

On the other hand, Germany and Belgium are great competitors at the level of banana marketing; that is, they are those countries that export bananas to the entire European continent. In the same way, they lead the first positions within the competitiveness index, in relation to the quantitative and qualitative variables.

3.3. Conclusions

To conclude, the Ecuadorian economy has focused on various productive sectors, including the production and export of oil as well as non-oil products, such as bananas, cocoa, shrimp, and flowers. In this sense, the banana has become one of the main export products within the country since it is an important support for the generation of employment within the Coastal region. Indeed, Ecuador has an advantage in terms of its location because it has a suitable climate for the cultivation and production of bananas, since the quality, size, color and flavor depend on the appropriate temperature of the cultivation area. Ecuador exports the best variety of bananas known as Cavendish, belonging to the group of Musaceae called AAA, the most important variety at the national level and the most capital in international trade. Although Ecuador has a suitable climate, throughout its history it has had to face various problems of weather conditions.

Since the end of 1996 there have been problems due to the presence of the El Niño phenomenon, which has caused serious damage to the coastal region of the country. The year 1998 was a period of production adjustment due to the conditions presented by the plantations as a consequence of the floods and the reappearance of the black sigatoka, which produced lower sales of the product. Likewise, during the year 2000, the constant litigation between producers and exporters, in addition to the expectations created regarding the decision of the European Union on the commercialization of the fruit in the new system, kept the banana sector in anxiety. Similarly, banana crops in Colombia, Costa Rica and Guatemala are more prone to diseases and pests that affect banana quality due to various natural phenomena, such as floods and tornadoes affecting the texture of bananas.

Another reason why Ecuador is the world leader in banana exports is because it has its own shipping fleet. The proximity of the plantations to the ports allows for competitive local transportation costs. However, the cost of freight per palletized box from the Port of Guayaquil to the European destinations included in the study is the highest. The main trading companies in

Ecuador, with the exception of UBESA which controls approximately 18% of exports, are in the hands of nationals. In fact, Los Ríos, El Guayas and El Oro are the provinces where the mass production of bananas for export is concentrated. In addition, one of Ecuador's marketing strategies is to position itself in the emerging countries of Asia, North Africa and Eastern Europe; hence its exports are among the most diversified in terms of destination. Thus, it is also important to recognize that the agricultural sector is becoming more competitive, not only in Latin America but also in some European countries such as Germany and Belgium, which have predominated in the marketing of bananas within the European continent, which is why they become strong competitors with Ecuador.

Within the analysis of the competitiveness of Ecuadorian bananas in international trade, it was determined that there are six competitive countries that are equally dedicated to the production and marketing of the product, namely: Costa Rica, the Philippines, Germany, Belgium, Colombia and Guatemala. Each of the countries was analyzed in relation to the different quantitative and qualitative variables that were obtained mainly from the state database and also international databases in order to know what the strengths and weaknesses are in terms of the topics studied. On the other hand, competitiveness indices often involve political and macroeconomic stability so that companies and the national economy have an evolutionary harmony in terms of their income and profitability.

3.4. Recommendations

In this context, Ecuador has not yet achieved sustained macroeconomic stability. The productive reality of the sector in Ecuador, characterized by heterogeneous levels of production, implies defining and introducing new mechanisms for the definition of a comprehensive policy for the sector, involving producers and exporters. Only with a united banana union, a government policy aimed at maintaining and improving the existing road and port infrastructure, an ambitious search for new markets, and internal control of production standards to fight fruit diseases and pests, will Ecuador be able to remain in the export leadership, despite the expected reduction in prices and the global oversupply. For this reason, the government of Ecuador must cooperate in the search for new markets, preserve macroeconomic stability, outline a commercial strategy with the producer and exporter associations, strengthen the link between the two and work together on the problems and needs of the sector, reduce search, transaction and information costs, and promote studies on the subject in order to deal with any externality, and successfully face the growing competitiveness of bananas in the world fruit arena.

3.5. Bibliography

(AEBE). (2021). *index @ www.aebe.com.ec*. https://www.aebe.com.ec/

(BANELINO). (2021). *f8d2710ed472d53999cb7ed96dbcc80bf42fb5ed @ banelino.com.do*. http://banelino.com.do/2017/06/26/origenes-del-banano-variedades-y-siembra/

(BCE). (2018). *1080-ecuador-crecio-30-en-2017-y-confirma-el-dinamismo-de-su-economia @ www.bce.fin.ec*. Banco Central del Ecuador. https://www.bce.fin.ec/index.php/boletines-de-prensa-archivo/item/1080-ecuador-crecio-30-en-2017-y-confirma-el-dinamismo-de-su-economia

(Corbana). (2022). *e635ec40e9c7ad5b72e4a9a83bdf8a63ec84032c @ www.corbana.co.cr*. https://www.corbana.co.cr/banano-de-costa-rica-2/#:~:text=Costa Rica exportó aproximadamente 121,Unidos y a la Unión Europea.

(El Universo). (2020). *b1e835ce01fefd83fd885e020eef8854fe590ce7 @ www.eluniverso.com*. https://www.eluniverso.com/noticias/2020/11/22/nota/8058529/cuanto-ha-aumentado-salario-minimo-ultimos-10-anos-que-factores/

(FAO). (2016). *b305b672e9ee99b6b7e8d3fdbd9cdfeb4c3dfa5b @ www.fao.org*. http://www.fao.org/zhc/detail-events/es/c/447827/

(OEA). (1974). *ch002 @ www.oas.org*. https://www.oas.org/USDE/publications/Unit/oea34s/ch002.htm#1. introducción

(OEC). (2018). *phl @ oec.world*. https://oec.world/es/profile/country/phl#:~:text=Exportaciones%3A Las principales exportaciones de,convertidores estáticos e inductores (%24

(OEC). (2021). *phl @ oec.world*. https://oec.world/es/profile/country/phl

(Sensagent). (2021). *d70da663f4459071770873d87f22f429beaa4b56 @ diccionario.sensagent.com*. http://diccionario.sensagent.com/Índice de Competitividad Global/es-es/

Acosta, A. (2006). Breve Historia Económica del Ecuador. En *La Flacso* (p. 406). https://biblio.flacsoandes.edu.ec/libros/111157-opac

Andrade Rodríguez, P. L., & Meza Lino, A. D. (2017). Acuerdo comercial entre Ecuador y la Unión Europea: El caso del sector bananero ecuatoriano. *Espacios*, *38*(58).

Banco Central del Ecuador. (2019). Boletín Informativo de Intengración Monetaria y Financiera. *Financiera, Dirección Nacional de Integración Monetaria y*, *2004*, 3. https://contenido.bce.fin.ec/documentos/PublicacionesNotas/BOLETIN312019.pdf

BCE.Banco Central del Ecuador. (2010). La Economía Ecuatoriana Luego de 10 Años de Dolarización. *Direccion General de Estudios*, 78. http://contenido.bce.fin.ec/documentos/PublicacionesNotas/Notas/Dolarizacion/Dolarizacion10anios.pdf

BCE. (2008). *Banco Central del Ecuador*. *Evolución de la Balanza Comercial*. 24. https://contenido.bce.fin.ec/documentos/Estadisticas/SectorExterno/BalanzaPagos/balanzaComercial/ebc200802.pdf

BCE. (2020). *1383-la-economia-ecuatoriana-decrecio-12-4-en-el-segundo-trimestre-de-2020 @ www.bce.fin.ec*. https://www.bce.fin.ec/index.php/boletines-de-prensa-archivo/item/1383-la-economia-ecuatoriana-decrecio-12-4-en-el-segundo-trimestre-de-2020

C, R. J. M. (2011). Crecimiento económico colombiano en 2011, «disparado» a pesar de las turbulencias externas: análisis de la coyuntura y perspectivas en 2012. *Perfil de Coyuntura Económica*, *18*, 7-25. http://www.scielo.org.co/pdf/pece/n18/n18a1.pdf

Cann, O. (2016). *ecee99ee2c3961f1c6ff6827fe75e6d4c102c89c @ es.weforum.org*.

https://es.weforum.org/agenda/2016/10/que-es-la-competitividad/

Castro, T. (2015). *Sistema Portuario Ecuatoriano*. 1-25. http://www.sela.org/media/3204408/15-sistema-portuario-ecuatoriano.pdf

Cedeño Jara Erick Eduardo. (2018). *Escuela De Comercio Exterior*. 1-48.

Comercio), (El. (2019a). *variedades-del-banano-cambian-color @ www.elcomercio.com*. https://www.elcomercio.com/actualidad/negocios/variedades-del-banano-cambian-color.html

Comercio), (El. (2019b, agosto 17). *plagas-banano-ecuador-fusarium-bonanza @ www.elcomercio.com*. https://www.elcomercio.com/actualidad/plagas-banano-ecuador-fusarium-bonanza.html#:~:text=El Gros Michel era la,demanda mundial de la fruta

Cruz, A. (2007). Index @ Web.Archive.Org. En *Centre for Reasearch on Globalisation*. http://web.archive.org/web/20071110000504/http://www.globalresearch.ca/index.php?context=va&aid=6229

Delgado, J. I., & Escorihuela, U. N. E. (2020). Comercio internacional. En *La economía aplicada*. https://doi.org/10.2307/j.ctv14t46dx.21

Digital), (Gestión. (2019a). *Que-Es-La-Balanza-Comercial @ Revistagestion.Ec*. https://revistagestion.ec/cifras/que-es-la-balanza-comercial

Digital), (Gestión. (2019b). *Que-Es-La-Balanza-Comercial @ Revistagestion.Ec*. https://revistagestion.ec/cifras/que-es-la-balanza-comercial

ECLAC. (2011). *Nicaragua Evolución Económica Durante 2010 Y Perspectivas Para 2011*. 42. https://repositorio.cepal.org/bitstream/handle/11362/26071/1/LCmexL1031_es.pdf

Econ, E., & Unidos, E. (2021). *Perfil de Alemania*. 1-12. https://www.mincit.gov.co/getattachment/37b4e8da-9ab3-4222-8e8b-f228929563ae/Alemania.aspx

Economic, F. (2014). *Índice Global de Competitividad. 2015*. http://www.competitividad.org.do/wp-content/uploads/2014/09/Reporte-Global-de-Competitividad-14-15.pdf

Ecuador, B. C. del. (2021). *156-preguntas-frecuentes-banco-central-del-ecuador @ www.bce.fin.ec*. https://www.bce.fin.ec/index.php/component/k2/item/156-preguntas-frecuentes-banco-central-del-ecuador

ESPAC. (2014). Encuesta de superficie y producción agropecuaria continua. *Instituto Nacional de Estadísticas y Censos*, 23. https://www.ecuadorencifras.gob.ec/documentos/web-inec/Estadisticas_agropecuarias/espac/espac-2016/Presentacion ESPAC 2016.pdf

Exbanlight. (2019). *55a772cfa1baef6c8fb62c0fd728947bd35ed9cc @ exbanlight.com*. https://exbanlight.com/banano-origen/#:~:text=Historia en el Ecuador,el cultivo en gran escala.

Fajnzylber, F. (1988). Competitividad internacional: Evolución y lecciones. *Revista de la CEPAL*, *1988*(36), 7-24. https://doi.org/10.18356/4630b47d-es

Fierro Ulloa, I. J., & Villacres Rojas, C. E. (2014). Diagnóstico de la cadena logística de exportación del banano ecuatoriano hacia estados unidos de américa. *Saber, Ciencia y Libertad*, *9*(1), 77-90. https://doi.org/10.18041/2382-3240/saber.2014v9n1.1985

Finagro. (2018). Ficha de inteligencia - Banano tipo exportación. *Finagro*, 1-14. https://www.finagro.com.co

Global, R. (2020). *las-empresas-mas-innovadoras-de-colombia-2020-parte-1 @ www.rsm.global*. https://www.rsm.global/colombia/es/ideas/insights-de-innovacion/las-empresas-mas-innovadoras-de-colombia-2020-parte-1

Goleman, A., Richard, B., & Mckee. (2014). ADN Económico de Guatemala. *Banco Mundial*, 82.

http://onu.org.gt/wp-content/uploads/2016/04/adn-guatemala-BM.pdf

Ilipinas, F. (2022). *Sector portuario en Filipinas*.

INEC-ESPAC. (2020). Encuesta de Superficie y Producción Agropecuaria Continua (ESPAC). *Espac*, 1-43. https://www.ecuadorencifras.gob.ec/documentos/web-inec/Estadisticas_agropecuarias/espac/espac-2019/Presentacion de los principales resultados ESPAC 2019.pdf

INEC. (2021). *1bc38ae6a2ca76f98378d8da7c9e7725bbe38fdd @ www.ecuadorencifras.gob.ec*. https://www.ecuadorencifras.gob.ec/productividad-y-competitividad-para-el-crecimiento-economico-sustentable/

INEC, I. N. de E. y C. (2020). Dirección / Departamento Unidad Elaborado por : Revisado por : Aprobado por : Contacto : *Boletín Técnico N° 01-2017-GAD Municipales*. https://www.ecuadorencifras.gob.ec/documentos/web-inec/Estadisticas_agropecuarias/espac/espac-2018/Boletin tecnico.pdf

Inflaci, P. I. B. (2015). *de 2014, cuando la Junta Monetaria la bajó a un 4,75%. Dado que tanto las presiones a la*. 7-9. https://repositorio.cepal.org/bitstream/handle/11362/37344/Guatemala_es.pdf

Instituto Nacional de Estadística y Geografía. (2020). *Encuesta Nacional Agropecuaria 2019 ENA Metodología*. www.inegi.org.mx

Interncional, C. de C. (2021). *a9a65ce38b9c5833764100dbc5bc588e4159065a @ www.intracen.org*. https://www.intracen.org/itc/analisis-mercados/estadisticas-del-comercio/

Kayleigh, B. (2018). *960f65df7a04529b375fcf1d52a59a0cb054e398 @ www.proyectum.com*. https://www.proyectum.com/sistema/blog/el-medio-ambiente-y-la-competitividad/

Larrea, C. (Editor), Espinosa, M., & Charvet, P. S. (1987). *El banano en el Ecuador*. 35.

http://www.flacsoandes.edu.ec/libros/digital/43488.pdf

Larrea, C., Espinosa, M., & Sylva Charvet, P. (1987). Auge y crisis de la producción bananera (1948-1976). *El banano en el Ecuador. Transnacionales, modernización y subdesarrollo*, *16*(2), 290. https://biblio.flacsoandes.edu.ec/libros/digital/43479.pdf

Lemarchand, G. (2017). *pf0000248067 @ unesdoc.unesco.org*. https://unesdoc.unesco.org/ark:/48223/pf0000248067

Macro), (Datos. (2022). *filipinas @ datosmacro.expansion.com*. https://datosmacro.expansion.com/deuda/filipinas?anio=2009

McCorriston, S. (2001). Price transmission, market power, marketing chain, returns to scale, food industry. *European Review of Agriculture Economics*, *28*(2), 143-159. https://doi.org/10.1093/erae/28.2.143

Mendoza, M. (2016, diciembre 11). *banano-boom-produccion-exportacion-planetaeideas @ www.elcomercio.com*. https://www.elcomercio.com/actualidad/banano-boom-produccion-exportacion-planetaeideas.html

Ministerio de Comercio Exterior del Ecuador. (2017). Informe Sector Bananero Ecuatoriano. *Ministerio de Comercio Exterior*, *53*(9), 1689-1699. https://www.produccion.gob.ec/wp-content/uploads/2019/06/Informe-sector-bananero-español-04dic17.pdf

Montero Cordero, F. (2017). La brecha social en Costa Rica: Un tema de definición económica, política y social. *Revista Latinoamericana de Derechos Humanos*, *27*(2), 85. https://doi.org/10.15359/rldh.27-2.4

Mora-Córdova, D. E., Lituma-Loja, A. A., & González-Illescas, M. L. (2020). Las certificaciones como estrategia para la competitividad de las empresas exportadoras. *INNOVA Research Journal*, *5*(2), 113-132. https://doi.org/10.33890/innova.v5.n2.2020.1274

Mundial, B. (2020). *indice-competitividad-global @ www.colombiacompetitiva.gov.co*. http://www.colombiacompetitiva.gov.co/snci/indicadores-internacionales/indice-competitividad-global

Mundial, B. (2021). *https://datos.bancomundial.org/indicador/NY.GDP.PCAP.CD?locations=CRoverview @ www.bancomundial.org*. https://www.bancomundial.org/es/country/costarica/overview#1

Ordoñez, D. (2012). El comercio exterior del Ecuador: Análisis del Intercambio de bienes desde la colonia hasta la actualidad. *Observatorio de la Economía Latinoamericana*, *173*. http://www.eumed.net/cursecon/ecolat/ec/2012/ddoi.zip

Organisation for Economic Co-operation and Development. (2018). *Perspectivas económicas de América Lat1. Ministerio de Salud Pú1. Ministerio de Salud Pública. Beneficios de la Lactancia Materna – Ministerio de Salud Pública. 2017. blica. Beneficios de la Lactancia Materna – Ministerio de Salud Pública. 2017. ina 201*. https://repositorio.cepal.org/bitstream/handle/11362/43513/1/LEO2018_es.pdf

Organisation for Economic Cooperation and Development (OECD). (2013). OECD (2013), "GDP per capita", in National Accounts at a Glance 2013. *National Accounts at a Glance*, 20-21. https://www.oecd-ilibrary.org/economics/national-accounts-at-a-glance-2013_na_glance-2013-en

Orozco, M., & Valdivia, M. (2017). *Los desafíos educativos en Guatemala y sus efectos sobre el caital humano y el desarrollo*. 14. https://www.thedialogue.org/wp-content/uploads/2017/11/Los-desafíos-educativos-en-Guatemala-y-sus-efectos-sobre-el-Capital-humano-y-el-desarrollo.pdf

Pocasangre, L. (2009). *Contenido*. https://www.fontagro.org/new/uploads/adjuntos/final_infotec_04_110_Salud_suelos_bananer

os.pdf

Porter, M. (2017). *books @ books.google.com.ec* (Deusto). https://books.google.com.ec/books?id=8wE2DwAAQBAJ&lpg=PP1&dq=ser competitivo michael porter&hl=es&pg=PP1#v=onepage&q&f=false

Productor, (El, &). (2018, abril 2). *7c4a22691f0a333a1856f03eaf6462fa35ad4daf @ elproductor.com*. https://elproductor.com/2018/04/manejo-del-cultivo-de-platano/#:~:text=A los 13 o 14,los racimos que están llenos%7D

ProEcuador. (2021). *Infraestructura Estratégica Infraestructura Estratégica*. https://www.proecuador.gob.ec/ecuadorinvestmentsummit/pdf/Infraestructura_estrategica.pdf

Sanchez, Maria; Zambrano, Carla; Bocca, F. (2010). *«El Rol Del Comercio Interacional En El Crecimiento Económico Del Ecuador: Antecedentes Y Perspectivas»*. *8719*(2006), 1-9. https://www.dspace.espol.edu.ec/bitstream/123456789/531/1/1035.pdf

Smith, A., Economic, W., Competitividad, F., Index, G., Global, A., Unidas, N., Global, A., & Econ, F. (2015). *Los 12 pilares de competitividad.* https://helmanquesada.com/wp-content/uploads/2017/09/LOS-12-PILARES-DE-COMPETITIVIDAD.pdf

Suconota, C., & Arèvalo, M. (2017). *Universidad De Cuenca Autoras* [Universidad de Cuenca]. https://dspace.ucuenca.edu.ec/bitstream/123456789/1193/1/tad1043.pdf

Tobar, H. (1993). *20 años de desarrollo rmarítimo @ www.dspace.espol.edu.ec*. https://www.dspace.espol.edu.ec/bitstream/123456789/6628/2/20 años de desarrollo rmarítimo.docx

UNCTAD. (2021). *trafico_maritimo @ www.miteco.gob.es*. https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/plan-ribera/contaminacion-marina-accidental/trafico_maritimo.aspx

Unidos, E. (2009). *Guatemala*. 209-215. https://repositorio.cepal.org/bitstream/handle/11362/1068/28/Guatemala_es.pdf

Universo), (El. (2009). *25f1242f7f8f7793226a5709c0705d9fb4d464c0 @ www.eluniverso.com*. https://www.eluniverso.com/2009/04/09/1/1356/1E670BFEEC074226A0D0BD0EBFED40EC.html/

Vanguardia), (La. (2018). *el-52--de-familias-filipinas-se-considera-pobre-mientras-inflacion-empeora @ www.lavanguardia.com*. https://www.lavanguardia.com/vida/20181010/452286017501/el-52--de-familias-filipinas-se-considera-pobre-mientras-inflacion-empeora.html

Vargas, A., Watler, W., Morales, M., & Vignola, R. (2017). Ficha técnica cultivo de banano. *Catie*, *2*(21), 1-56. http://www.mag.go.cr/bibliotecavirtual/reduccion-impacto-por-eventos-climaticos/Informe-final-Banano.pdf

Vásquez, R. (2017). El impacto del comercio del Banano en el desarrollo del Ecuador. *AFESE Temas Internacionales*, *53*(53), 167-182. https://afese.com/img/revistas/revista53/comerbanano.pdf

WIPO. (2022). *banano @ www.wipo.int*. https://www.wipo.int/ip-outreach/es/ipday/2020/case-studies/banano.html

Zanini, G. (1999). *Filipinas: Crisis y oportunidades*. https://www.oecd.org/countries/philippines/35287901.pdf